

US 2/97 – CORRIDOR SAFETY STUDY

ENVIRONMENTAL TECHNICAL MEMORANDUMS

Prepared for:

**Washington State Department of Transportation
WSDOT North Central Region**

Prepared by:

David Evans and Associates, Inc.

with

**Parsons, Brinckerhoff, Quade & Douglas, Inc.
Larson Anthropological Archeologist Services Limited (LAAS)**

May 17, 2001

WDOT0000-0232



**DAVID EVANS
AND ASSOCIATES INC.**

Celebrating 25 Years of Service

US 2/97 – CORRIDOR SAFETY STUDY

ENVIRONMENTAL TECHNICAL MEMORANDUMS

Prepared for:

**Washington State Department of Transportation
WSDOT North Central Region**

Prepared by:

**David Evans and Associates, Inc.
Parsons, Brinckerhoff, Quade & Douglas, Inc.
Larson Anthropological Archeologist Services Limited (LAAS)**

May 17, 2001

WDOT0000-0232

Table of Contents

EXECUTIVE SUMMARY	1-1
LAND USE	1-1
FLOODPLAINS	1-2
PARKS AND RECREATION	1-2
WETLANDS, VEGETATION AND WILDLIFE.....	1-2
FISHERIES, INCLUDING THREATENED AND ENDANGERED SPECIES.....	1-2
CULTURAL AND ARCHAEOLOGICAL RESOURCES	1-2
LAND USE	2-1
CURRENT LAND USE	2-1
PLANNED LAND USE.....	2-2
POPULATION, EMPLOYMENT AND HOUSEHOLD FORECASTS.....	2-2
Changes in Population	2-2
Changes in Employment.....	2-2
Changes in Households.....	2-3
PROPOSED DEVELOPMENT PROJECTS	2-3
PLANNED INFRASTRUCTURE IMPROVEMENTS.....	2-3
PRIME AND UNIQUE FARMLANDS AND DESIGNATED FARMLANDS	2-3
HAZARDOUS MATERIALS DATABASE SEARCH.....	2-16
MISCELLANEOUS RELATED GROWTH ISSUES.....	2-16
PROJECT CONSTRAINTS	2-16
JURISDICTIONAL SHORELINES.....	3-1
EXISTING CONDITIONS	3-1
PROJECT CONSTRAINTS	3-1
PROJECT FEASIBILITY	3-2
DESIGNATED FLOODPLAINS	4-1
EXISTING CONDITIONS	4-1
PROJECT CONSTRAINTS	4-1
PROJECT FEASIBILITY	4-2
PARKS AND RECREATION	5-1
EXISTING CONDITIONS	5-1
PROJECT CONSTRAINTS	5-2
PROJECT FEASIBILITY	5-2
ARCHAEOLOGICAL RESOURCES AND HISTORIC STRUCTURES ARCHIVAL REVIEW, CHELAN COUNTY, WASHINGTON.....	6-1
INTRODUCTION.....	6-1
PROJECT DESCRIPTION.....	6-1

Table of Contents (cont.)

METHODOLOGY	6-1
ARCHAEOLOGICAL RESOURCES AND HISTORIC STRUCTURE ARCHIVAL REVIEW	6-2
ARCHAEOLOGICAL STUDIES	6-2
HISTORIC STRUCTURES STUDIES	6-3
BIBLIOGRAPHY	6-5
PRELIMINARY ENVIRONMENTAL REVIEW TECHNICAL MEMORANDUM FOR WETLANDS, VEGETATION, WILDLIFE, FISHERIES, AND THREATENED/ENDANGERED SPECIES	7-1
1.0 INTRODUCTION AND METHODS	7-1
2.0 RESULTS	7-2
2.1 Project-Wide Summary	7-2
2.2 Area A: Blewett Junction	7-4
2.3 Area B: Dryden	7-7
2.4 Area C: Cashmere	7-9
2.5 Area D: Monitor	7-11
2.6 Area E: Sunnyslope	7-11
2.7 Impacts and Mitigation	7-15
2.8 References	7-16

List of Tables

Table 2-1. Generalized Land Use	2-1
Table 3-1. Designated Shoreline Classification and Buffers	3-2
Table 6-1. Previous Cultural Resources Studies Within 0.25 Miles of the US 2/97 Corridor Safety Study Area	6-2
Table 6-2. Archaeological Sites Within 0.25 Miles of the US 2/97 Corridor Safety Study Area	6-3
Table 6-3. Historic Structures Within 0.25 Miles of the US 2/97 Corridor Safety Study Area	6-3
Table 7-1. Assessment Areas and Key Intersections	7-1
Table 7-2. Protected Fish Species in Wenatchee River in Project Area	7-3
Table 7-3. Environmental Constraints by Key Intersection	7-4

Table of Contents (cont.)

List of Figures

Figure 2-1.	Map 1 - Existing Land Use Inventory (Areas A and B).....	2-5
Figure 2-2.	Map 2 - Existing Land Use Inventory (Areas B and C).....	2-6
Figure 2-3.	Map 3 - Existing Land Use Inventory (Area C).....	2-7
Figure 2-4.	Map 4 - Existing Land Use Inventory (Area D).....	2-8
Figure 2-5.	Map 5 - Existing Land Use Inventory (Areas D and E).....	2-9
Figure 2-6.	Map 6 – Chelan County Comprehensive Plan: Land Use Designations (Area A)	2-10
Figure 2-7.	Map 7 - Chelan County Comprehensive Plan: Land Use Designations (Areas B and C)	2-11
Figure 2-8.	Map 8 - Chelan County Comprehensive Plan: Land Use Designations (Area C)	2-12
Figure 2-9.	Map 9 - Chelan County Comprehensive Plan: Land Use Designations (Area C)	2-13
Figure 2-10.	Map 10 - Chelan County Comprehensive Plan: Land Use Designations (Areas D and E)...	2-14
Figure 2-11.	Map 11 - Chelan County Comprehensive Plan: Land Use Designations	2-15
Figure 3-1.	Map 1 - Designated Shoreline Environment (Areas A and B).....	3-3
Figure 3-2.	Map 2 - Designated Shoreline Environment (Areas B and C).....	3-4
Figure 3-3.	Map 3 - Designated Shoreline Environment (Area C).....	3-5
Figure 3-4.	Map 4 - Designated Shoreline Environment (Area D).....	3-6
Figure 3-5.	Map 5 - Designated Shoreline Environment (Areas D and E).....	3-7
Figure 4-1.	Map 1 - FEMA Floodplains (Areas A and B).....	4-3
Figure 4-2.	Map 2 - FEMA Floodplains (Areas B and C).....	4-4
Figure 4-3.	Map 3 - FEMA Floodplains (Area C).....	4-5
Figure 4-4.	Map 4 - FEMA Floodplains (Area D).....	4-6
Figure 4-5.	Map 5 - FEMA Floodplains (Areas D and E).....	4-7
Figure 7-1.	Blewett Junction to Wenatchee Environmental Resource Map (Areas A & B)	7-6
Figure 7-2.	Blewett Junction to Wenatchee Environmental Resource Map (Areas B & C)	7-8
Figure 7-3.	Blewett Junction to Wenatchee Environmental Resource Map (Area C)	7-10
Figure 7-4.	Blewett Junction to Wenatchee Environmental Resource Map (Area D)	7-13
Figure 7-5.	Blewett Junction to Wenatchee Environmental Resource Map (Areas D & E)	7-14

Appendices

Appendix A

Appendix B

EXECUTIVE SUMMARY

This document establishes baseline environmental conditions to further analyze potential improvements for the safety, operation, and carrying capacity of a 14.4-mile segment of US 2/97 from Blewett Junction to Easy Street. The project vision is to develop the corridor so that it is a safe limited access facility that accommodates growth. The principle objective will be to analyze the existing at-grade (signalized and non-signalized) intersections within the project limits to identify long range alternatives.

Alternatives to be considered include the following improvements, singly or in combination:

- Taking no action
- Providing channelization improvements to a non-signalized intersection
- Constructing a signalized intersection
- Constructing a grade separated interchange to replace the intersection
- Constructing a grade separated interchange at an alternate location
- Constructing a secondary road network
- Constructing a pedestrian overcrossing or undercrossing
- Restricting turning movements at an intersection
- Closing an intersection
- U-Turn opportunities

The alternative strategies will be evaluated on a total corridor basis but the project will be divided into the following five areas for alternative development:

Reference Area	Area Name	Study Intersections
Area A	Blewett Junction	US 2/97 intersection, US 2/97 @ Blewett Cutoff Road, SR 97 @ Blewett Cutoff Road, Saunders/Foster/Deadman Hill Road, Motel Road, Dryden Dump
Area B	Dryden	Alice Road, Dryden Road and North Dryden Road
Area C	Cashmere	Cottage Avenue (Cotlets Way), Division Street (Applets Way), and Hay Canyon, Old Monitor Road, Red Apple/Old Monitor Road
Area D	Monitor	Bridge Street, Red Apple/Selts Road, Main Street/Easy Street
Area E	Sunnyslope	Easy Street, School Street and Lower Sunnyslope Road

The environmental baseline information prepared by the consultant team includes the following:

Land Use

The land use report documents current land use, planned land use, and projected changes in population, employment, and households. The report also researches farmland issues to document federal, state or local farmland designation for designations for lands along the study area portions of the US 2/97 corridor and documents any project development constraints associated with the designations.

The land use report will also document jurisdictional shorelines in the study areas and their implications for project development.

Floodplains

The floodplains report details FEMA designated floodplains and project development constraints due to floodplains. A map showing the floodway and floodplain within each study area uses the FEMA maps as a base.

Parks and Recreation

The parks and recreation report documents existing and planned facilities in the corridor study areas that may constrain or impact project development. A discussion of the procedures required in the event that it is necessary to take parklands for project development is also provided. A map showing relevant park and recreation facilities within each study area is provided.

Wetlands, Vegetation and Wildlife

The wetlands, vegetation, and wildlife report provides a preliminary inventory of wetlands in each study area. The National Wetlands Inventory maps provided the base information, supplemented with data from Chelan County and a two-day wetland reconnaissance effort. No wetland delineation or detailed characterization was undertaken for preparation of this report. The report documented potential constraints if wetlands are encountered and likely mitigation measures that would be required. The report also investigates and identifies vegetative communities and associated wildlife within each of the study areas. Existing databases, including WDFW Priority Habitat and Species, and WDNR Natural Heritage data files was used as primary data sources. The report documented the regulatory status of known plants and animals or those that potentially may occur in the study areas and the associated potential constraints their presence may have on project development.

Fisheries, Including Threatened and Endangered Species

The fisheries, including threatened and endangered species technical report identifies known fish species present in rivers and streams within or adjacent to each of the study areas. Existing information from readily accessible databases was used as the primary data source. The report documents the regulatory status of fish found in the study areas and potential constraints their presence may have on project development. The report also discusses design features and broad mitigation concepts typically used to offset impacts to fish. A two-day site inspection was conducted to identify areas of special concern and locations where mitigation and restoration could potentially be undertaken to offset project impacts.

Cultural and Archaeological Resources

The Cultural and Archaeological Resources report identified known archaeological resources and historic structures within the study areas. Data was limited to a review of State Office of Archaeology and Historic Preservation records. The report includes methods and a tabular presentation of the data with gross locations limited to township, range, and section, type of resource and evaluation status. The information is used as a screening criterion and location information will be kept confidential. No fieldwork, historic or ethnographic research, or consultation with Tribes was conducted for this effort.

LAND USE

Following is information presented for the US 2/97 Corridor Safety Study (Project) to provide an environmental overview for the analysis of potential safety, operation, and capacity improvements for the 14.4-mile segment of US 2/97 from Blewett Junction (US 2 and US 97 Junction) to Easy Street, near Wenatchee. This report provides an analysis of the existing and proposed land uses along the corridor. The Land Use section evaluates land use issues within an approximate two-mile corridor (approximately one mile on each side of the highway) width of US 2/97. For the purpose of this section, the Study Area A (see Map 1) was lengthened to include the Peshastin Community due to the planned Port of Chelan County proposed industrial park (up to an additional 400 jobsⁱ). This project may have traffic issues from this proposed land use and will be discussed under the Planned Land Use section of this report. The Project's impact to land use along the corridor will also be evaluated.

Current Land Use

To establish current land use information, the Chelan County Assessor's records were reviewed for the study area. The assessor has several land use classifications listed for the purpose of appraising property values. These classifications were simplified for the purpose of this study into generalized land use classifications as shown in Table 1 and illustrated on Maps 1 through 5. Table 1 represents the percentage of land devoted to these uses.

Table 2-1. Generalized Land Use

Land Use Type	Percent of Study Area
Agricultural	18.3%
Commercial	1.23%
Industrial	0.6%
Mobile Home Parks	0.04%
Multi-Family Dwellings	0.05%
Parks, Open Space	18.57%
Public/Quasi-Public	11.9%
Resource Production	20.5%
Single Family Dwellings	11.0%
Undeveloped Land	14.0%
Unknown	3.81%

It should be noted that the groupings are very generalized. For instance, the Parks, Open Space designation includes public and private parks as well as agricultural/timber properties that are currently within the Current Use Tax Program (RCW 84.34). Resource production includes commercial forest lands and mines. Undeveloped land includes all lands that are considered as undeveloped (i.e. vacant residential and vacant commercial properties). Public/Quasi-Public property includes properties that are owned by federal, state and local governments as well as religious groups (i.e. places of worship) and may include amusement and other public assembly uses. Unknown are those properties that do not have a primary or secondary land use code assigned by the assessor.

The largest bulk of property is utilized as agricultural, resource production, designated open space and parks (57.37 percent). The next largest land use is devoted to residential development (11.9 percent).

Commercial and industrial development makes up 1.83 percent. Undeveloped and unknown account for 17.81 percent of the study area. The current land use of study area reflects the agricultural heritage of the Wenatchee River valley.

Planned Land Use

The Chelan County and City of Cashmere Comprehensive Plans outline the desires of the their respective communities vision for the development of the study area over the next 20-years. Both plans envision a major conversion of land use from agricultural/resource based uses to rural and urban residential uses. The residential uses range from a density of 1 unit per 20 acres to 5,000 square foot lot sizes. The plans also make accommodation for increased commercial and industrial uses. When reviewing the existing land use maps (maps 1 through 5) and the comprehensive plan maps (maps 6 through 11) it is obvious to see the expected changes in land use over time. It is expected that agricultural uses will diminish and not be the primary use of land in many areas along US 2/97.

The Port of Chelan County's Comprehensive Plan was also reviewed to review their planned growth. The port currently owns a 100-acre industrial park at Olds Station in the northern portion of the City of Wenatchee. This park has grown to employ over 600 people. The port estimates that this area is about 60 percent built out. In addition to Olds Station, the port has acquired 15 acres of land in Malaga (outside of the study area) and another 58 acres in Peshastin (just west of the Blewett Pass cutoff road). The Peshastin Industrial Area is the site of the old mill adjacent to the Wenatchee River. The port anticipates constructing a technology park that could employ up to 400 people. Other properties the port owns within Chelan County are the Pangborn Airport Business Park (180 acres) and the North Baker Plats Industrial Area (approximately 8 acres).

Population, Employment and Household Forecasts

Changes in Population

The comprehensive plans for Chelan County, the City of Cashmere and the Port of Chelan County provides information in relation to potential populations growth, employment and household needs. Much of this information was based on the 1990 U.S. Census with projections provided by the Washington State Office of Financial Management (OFM). In 1990, Chelan County's overall population was 52,250. The estimated population (OFM, 1995) in the county for year 1997 is 62,200 and year 2017 is 90,444. Current U.S. Census information released for the year 2000 estimates that Chelan County has grown to 66,616, a 27.5 percent change from 1990. OFM estimates that in year 2005 there will be 74,267 people within Chelan County (an additional 7,651 people or 11.5 percent). Please refer to Appendix B to review related information from the U.S. Census Bureau and information from the stated comprehensive plans.

Chelan County has allocated population growth for UGAs (incorporated city limits include surrounding areas of unincorporated Chelan County that are expected to be annexed are referred to as an UGA) and Rural and Resource Lands and estimate that an additional 28,244 people. The Cashmere UGA is expected to grow by 1,400 people, the Sunnyslope UGA is expected to absorb an additional 694 people. Rural and resource lands in the county are expected to grow by 11,530. How many people will locate within the study area is not possible to estimate.

Changes in Employment

The four largest employment sectors in Chelan County include agriculture, forestry, fishing, services, retail and government. The manufacturing sector represents the fifth largest sector in respect to the total

wages paid. Manufacturing in Chelan County plays a large role in the county's economy. Agriculture employs the greatest number of persons within the county but is third as a percentage of wages paid. Since 1990, the percentage of agricultural workers has decreased about 3 percent in 1998. The number of farms is also decreasing but the acreage is remaining the relatively the same. This may be a result of the family farms being bought by larger concerns. The value of the agricultural products sold has declined by almost \$6 million. This may be a result of several factors, including, but not limited to, global markets, increased competition, increased regulatory burdens, increased manufacturing costs and weather.

This is most evident on the Port of Chelan County's Comprehensive Plan to position themselves to ensure an adequate supply of industrial lands within Chelan County. With their purchase of land in the Peshastin community (as well as their continued development of their other properties) they are ensuring that they can help shift jobs and economic benefits from the agricultural industry to that of industrial, manufacturing, technical and warehousing jobs and wages. This employment shift is shown to bring higher wages into the local economy, which can benefit Chelan County as a whole.

Changes in Households

According to the Chelan County Comprehensive Plan, housing units within the study area has grown steadily and countywide manufactured housing is increasing in their share of the total housing market. Within the Sunnyslope UGA, Cashmere UGA and the Wenatchee UGA it is anticipated that an additional 4,100 housing units will be needed. Countywide, Rural and Resource lands are projected to need an additional 5,517 housing units. This increase in units reflects the changes in land use patterns detailed in the county comprehensive plan.

Proposed Development Projects

In reviewing Chelan County Planning Department's current development projects records that are within the study area, you do not find a significant number of projects. There are no significant commercial or industrial projects currently in review along the corridor. There have been a number of short subdivisions and formal subdivisions that have been approved and/or are currently in the preliminary review process. Since 1995 there have been 250 lots applied for, 136 of those lots have been recorded, 4 are still in the preliminary review process and 110 lots have been given preliminary approval and are under construction. This project is currently known as "Mountain Brook" and is located on Knowles Road.

The D'Anjou Bakery (3898 Old Monitor Road) is seeking a Conditional Use Permit (CUP) to expand its facility. A Jehovah's Witness Church was granted a CUP on September 25, 2000 to construct within residential area at 10769 Highway 2.

Planned Infrastructure Improvements

In review of 6-year Transportation Improvement Program (2001 - 2006) for Chelan County, two projects are scheduled within the study area. They are the West Monitor Bridge and West Cashmere Bridge. Both projects are expected to start in 2004. Limited project funding for the West Monitor Bridge is scheduled for 2003.

Prime and Unique Farmlands and Designated Farmlands

Chelan County has recognized the importance of prime and unique farmlands within the study area. They have reviewed the U.S. Soil Conservation Service's soil classification maps and used their soil classification system and the Washington Administrative Code (WAC) in designating agricultural

resource lands. The Growth Management Act (GMA) requires local jurisdictions to protect agricultural lands of long term commercial significance. WAC 365-190-050 outlines the criteria to be used in designating and protecting these lands. The GMA defines long-term commercial significance to include the growing capacity, productivity and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas and the possibility of more intense uses of the land.

The county has identified several issues and concerns during the development of their agricultural resource lands comprehensive plan policies. They are listed in the comprehensive plan and are included here:
















- Agriculture vs. residential development
- Who is responsible for mitigation measures (developer of incompatible uses)
- Where should development occur
- Recognize as a significant economic activity
- Agricultural uses vs. compatible and incompatible uses
- Availability of irrigation water
- Protecting farmers options
- Periodic re-examination of the Commercial Agricultural designations

The county still recognizes the fact that areas not designated as commercial agricultural lands can still play an important role in the local industry. Orchards designated with rural residential designations can still be viable with buffers between the orchards and the non-farm development. Future agricultural expansion into undeveloped areas is still a possibility but will be heavily dependent upon the availability of water and the market place.

Maps 6 through 10 show those lands that have been designated by Chelan County as commercial agricultural lands. Even though there are several parcels currently in agricultural uses and not have been designated as commercial agricultural lands, the county has several goals and policies that will provide landowners the opportunities and flexibility to continue farming and still allowing limited conversion to agricultural uses. The county has designated the majority of existing orchards into low-density single-family land use designations (ranging in density from 1 unit per 20 acres to 1 unit per 2.5 acres). Through clustering of home sites and buffering from the agricultural uses, it would still be possible to reserve areas for continued agricultural production. In addition to regulatory incentives to continue agriculture, Chelan County also has available a current use taxation program that provides for lower tax assessments on the agricultural lands.

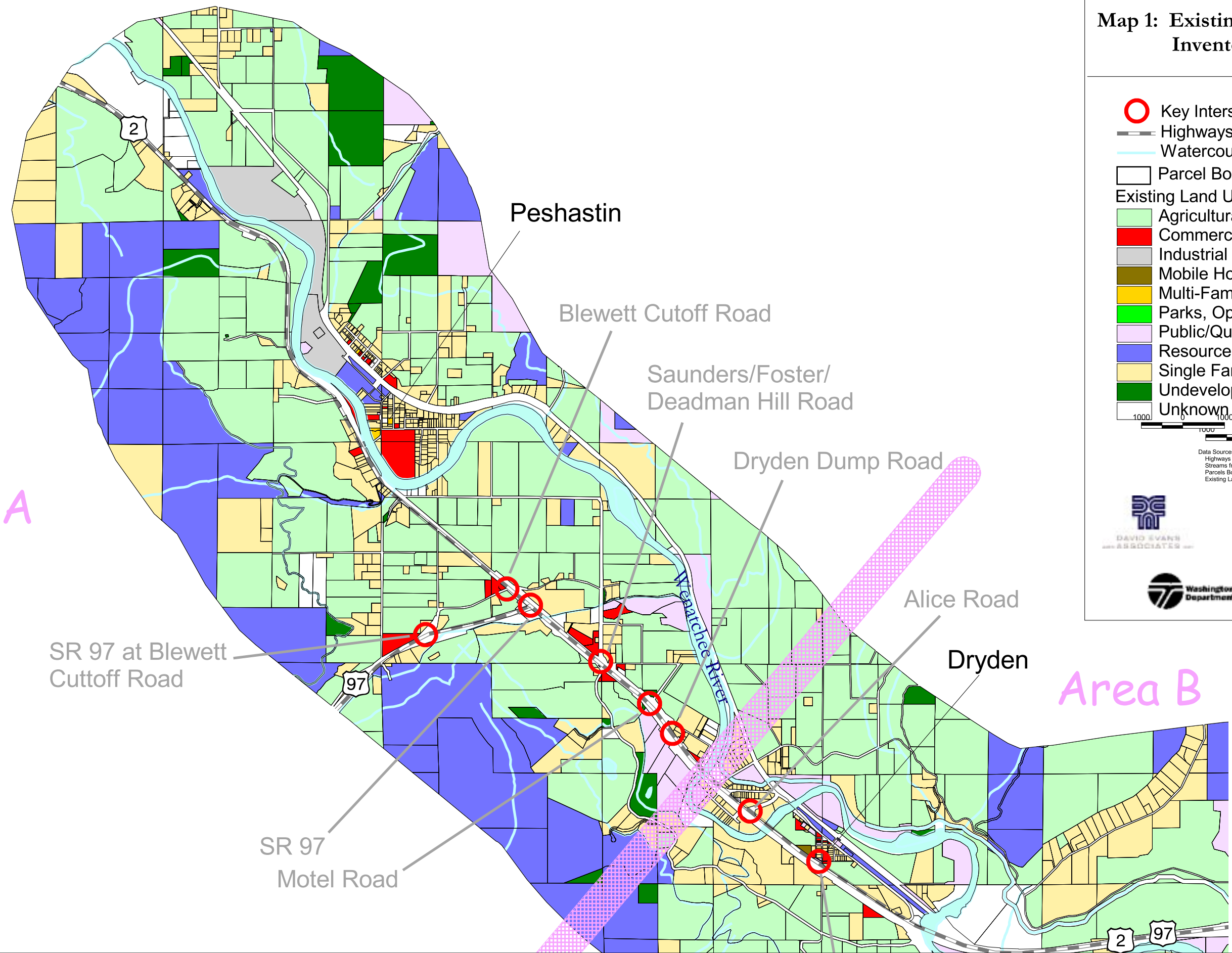
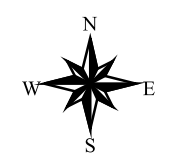
The City of Cashmere does currently have orchards (please refer to Map 3) located within their Urban Growth Area (UGA) but has not designated any of these lands as commercial agricultural lands (please refer to Map 11). The orchards within their UGA are surrounded by single-family dwellings and will experience pressure to convert to residential uses as envisioned by the city.

Map 1: Existing Land Use Inventory

-  Key Intersections
-  Highways
-  Watercourses
-  Parcel Boundaries
- Existing Land Use Inventory
 -  Agricultural
 -  Commercial
 -  Industrial
 -  Mobile Home Parks
 -  Multi-Family Dwellings
 -  Parks, Open Space
 -  Public/Quasi-Public
 -  Resource Production
 -  Single Family Dwellings
 -  Undeveloped Land
 -  Unknown



Data Sources:
 Highways from WSDOT
 Streams from Chelan County
 Parcels Boundaries from Chelan County
 Existing Land Use Inventory from Chelan County



Area A

Area B

SR 97 at Blewett Cutoff Road

SR 97 Motel Road

Map 2: Existing Land Use Inventory

- Key Intersections
- ▬ Highways
- ▬ Watercourses
- ▭ Parcel Boundaries
- Existing Land Use Inventory
 - Agricultural
 - Commercial
 - Industrial
 - Mobile Home Parks
 - Multi-Family Dwellings
 - Parks, Open Space
 - Public/Quasi-Public
 - Resource Production
 - Single Family Dwellings
 - Undeveloped Land
 - Unknown

1000 0 1000 Feet

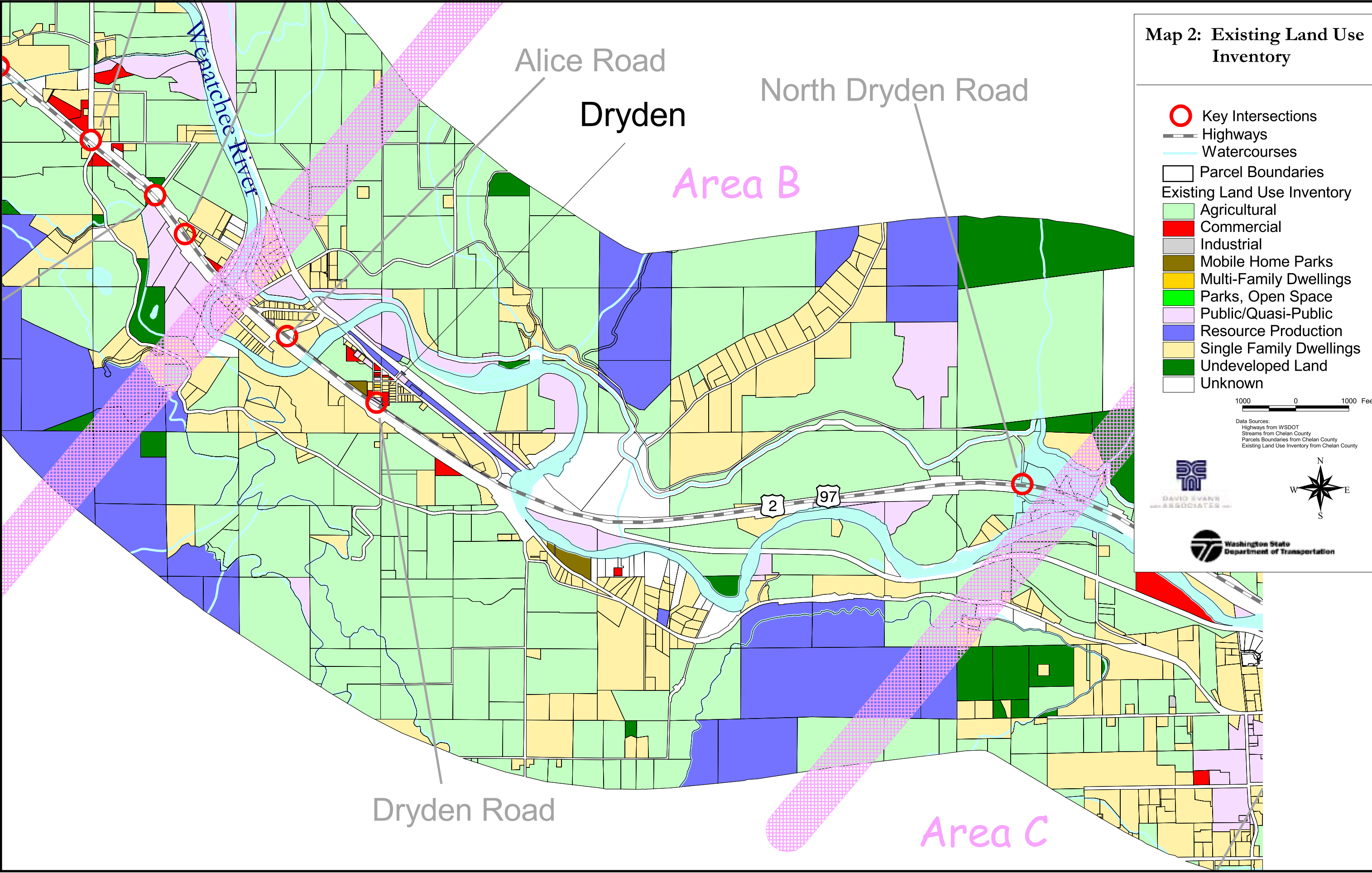
Data Sources:
Highways from WSDOT
Streams from Chelan County
Parcels Boundaries from Chelan County
Existing Land Use Inventory from Chelan County

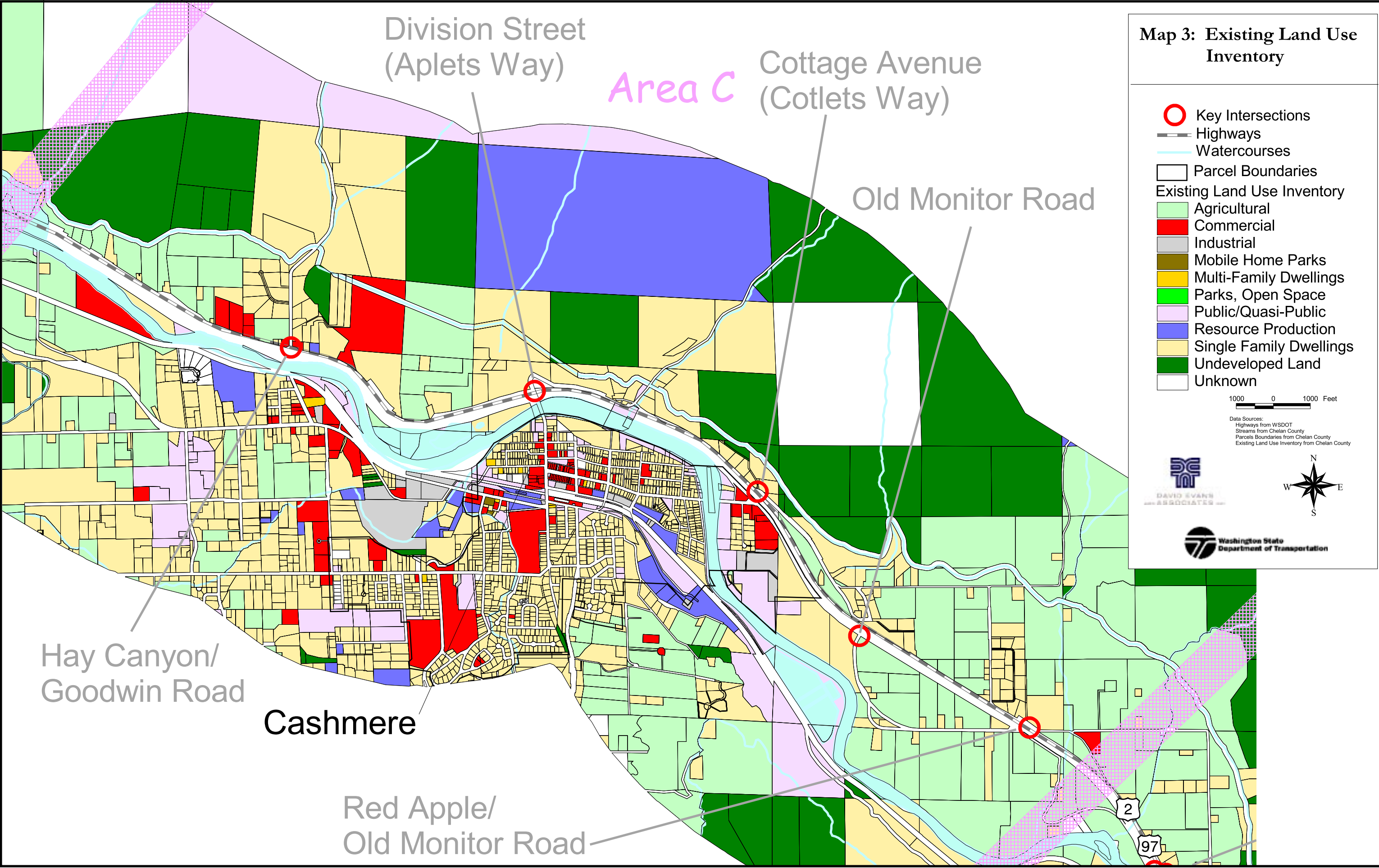


DAVID EVANS
& ASSOCIATES



Washington State
Department of Transportation





Map 3: Existing Land Use Inventory

- Key Intersections
- Highways
- Watercourses
- ▭ Parcel Boundaries
- Existing Land Use Inventory
 - Agricultural
 - Commercial
 - Industrial
 - Mobile Home Parks
 - Multi-Family Dwellings
 - Parks, Open Space
 - Public/Quasi-Public
 - Resource Production
 - Single Family Dwellings
 - Undeveloped Land
 - Unknown

1000 0 1000 Feet

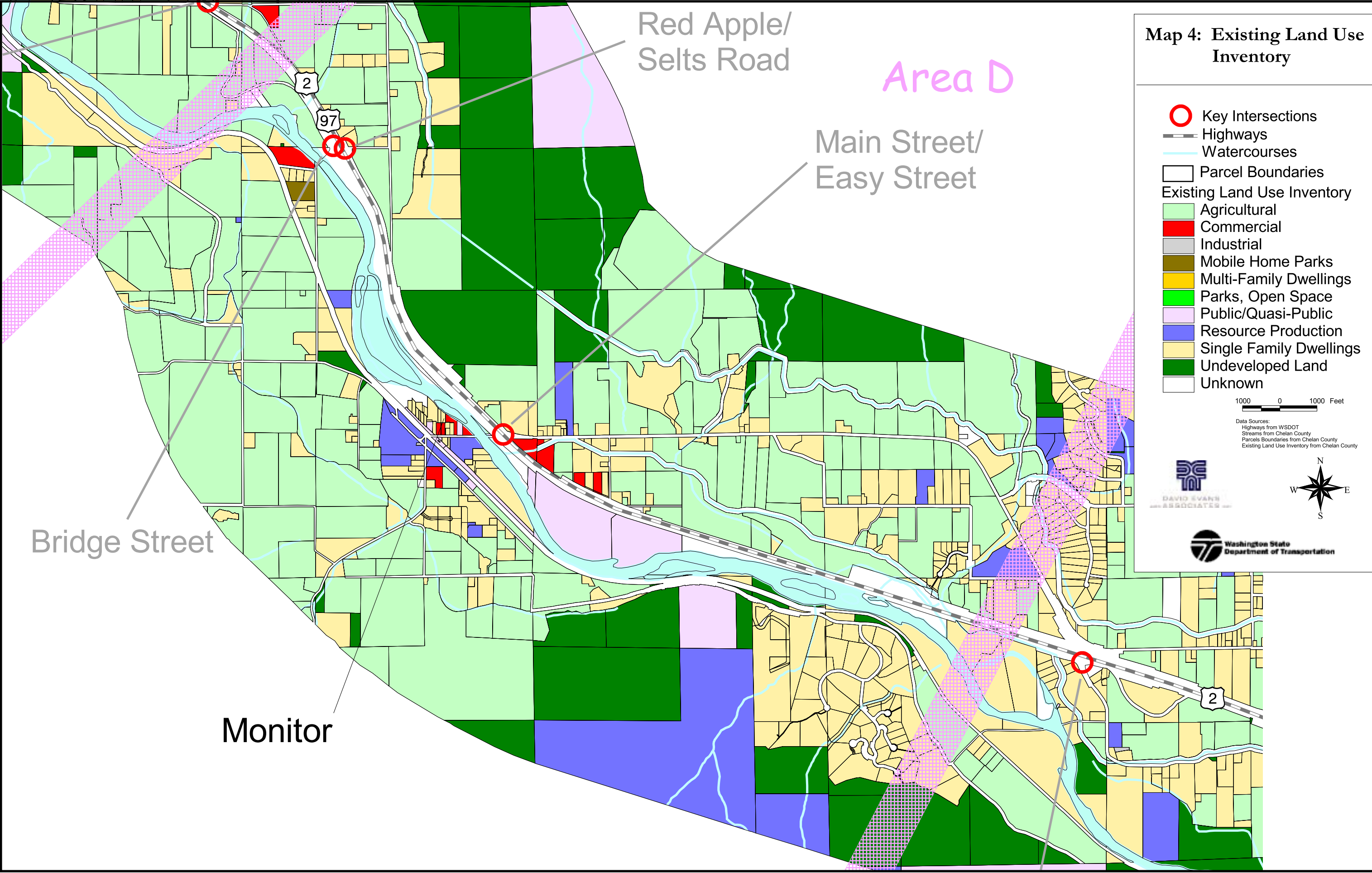
Data Sources:
Highways from WSDOT
Streams from Chelan County
Parcels Boundaries from Chelan County
Existing Land Use Inventory from Chelan County



DAVID EVANS
ASSOCIATES



Washington State
Department of Transportation



Map 4: Existing Land Use Inventory

- Key Intersections
- ▬ Highways
- ▬ Watercourses
- ▭ Parcel Boundaries
- Existing Land Use Inventory
 - ▭ Agricultural
 - ▭ Commercial
 - ▭ Industrial
 - ▭ Mobile Home Parks
 - ▭ Multi-Family Dwellings
 - ▭ Parks, Open Space
 - ▭ Public/Quasi-Public
 - ▭ Resource Production
 - ▭ Single Family Dwellings
 - ▭ Undeveloped Land
 - ▭ Unknown

1000 0 1000 Feet

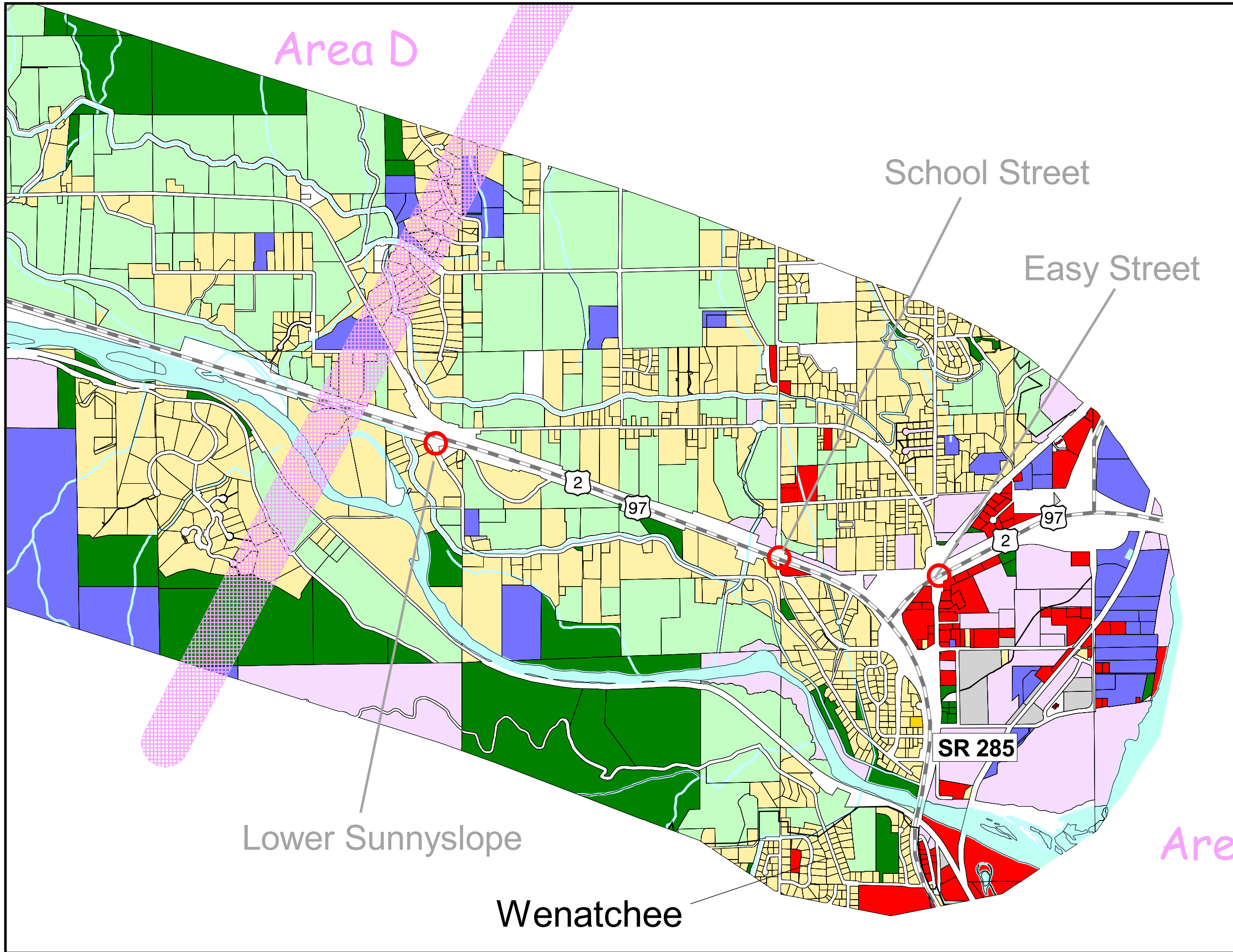
Data Sources:
Highways from WSDOT
Streams from Chelan County
Parcels Boundaries from Chelan County
Existing Land Use Inventory from Chelan County



DAVID EVANS
& ASSOCIATES



Washington State
Department of Transportation



Map 5: Existing Land Use Inventory

Key Intersections

Highways

Watercourses

Parcel Boundaries

Existing Land Use Inventory

Agricultural

Commercial

Industrial

Mobile Home Parks

Multi-Family Dwellings

Parks, Open Space

Public/Quasi-Public

Resource Production

Single Family Dwellings

Undeveloped Land

Unknown

1000001000 Feet

0

Data Sources:
Highways from WSDOT
Streams from Chelan County
Parcels Boundaries from Chelan County
Existing Land Use Inventory from Chelan County

DAVID EVANS
ASSOCIATES

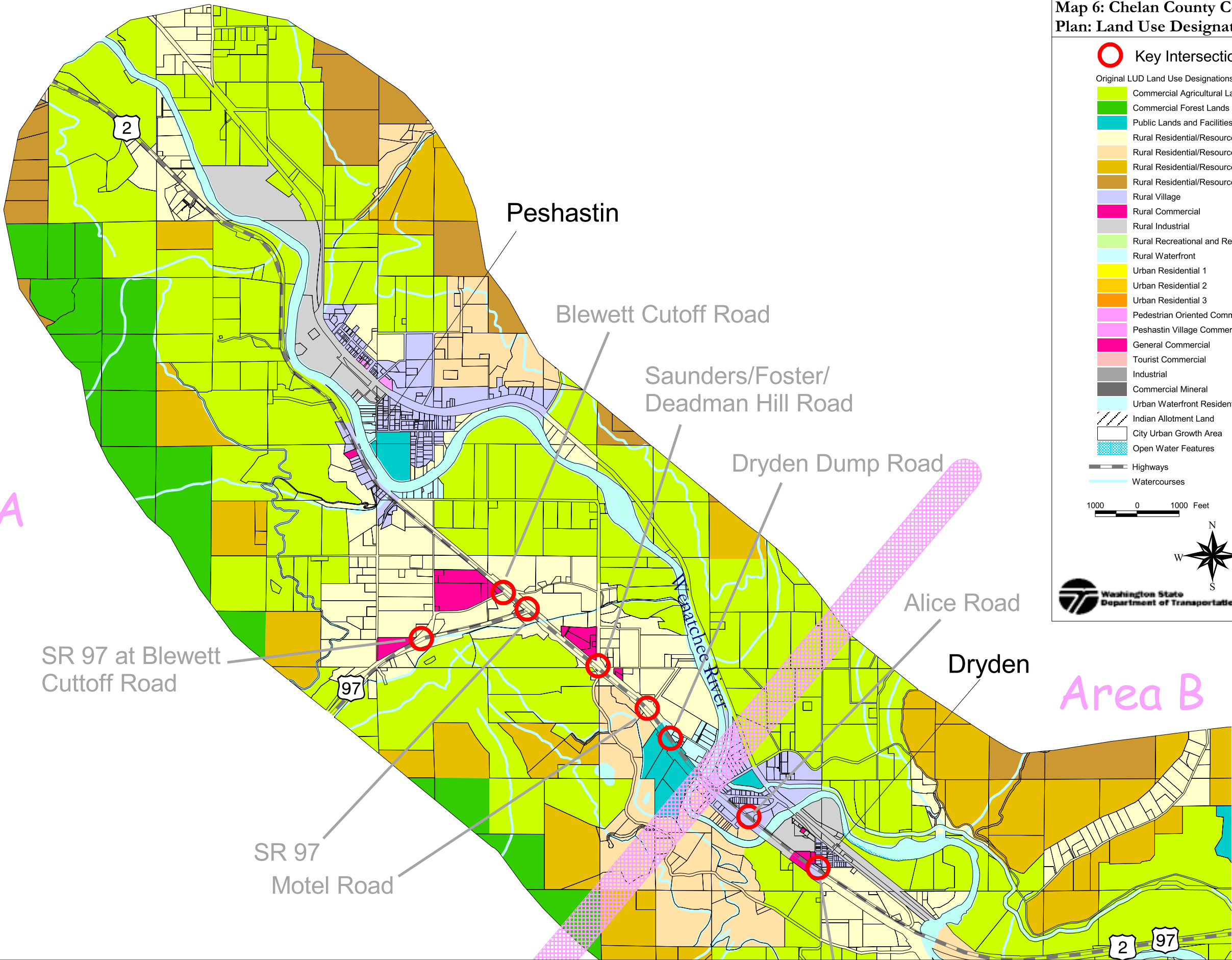
Washington State
Department of Transportation

N
W
E
S

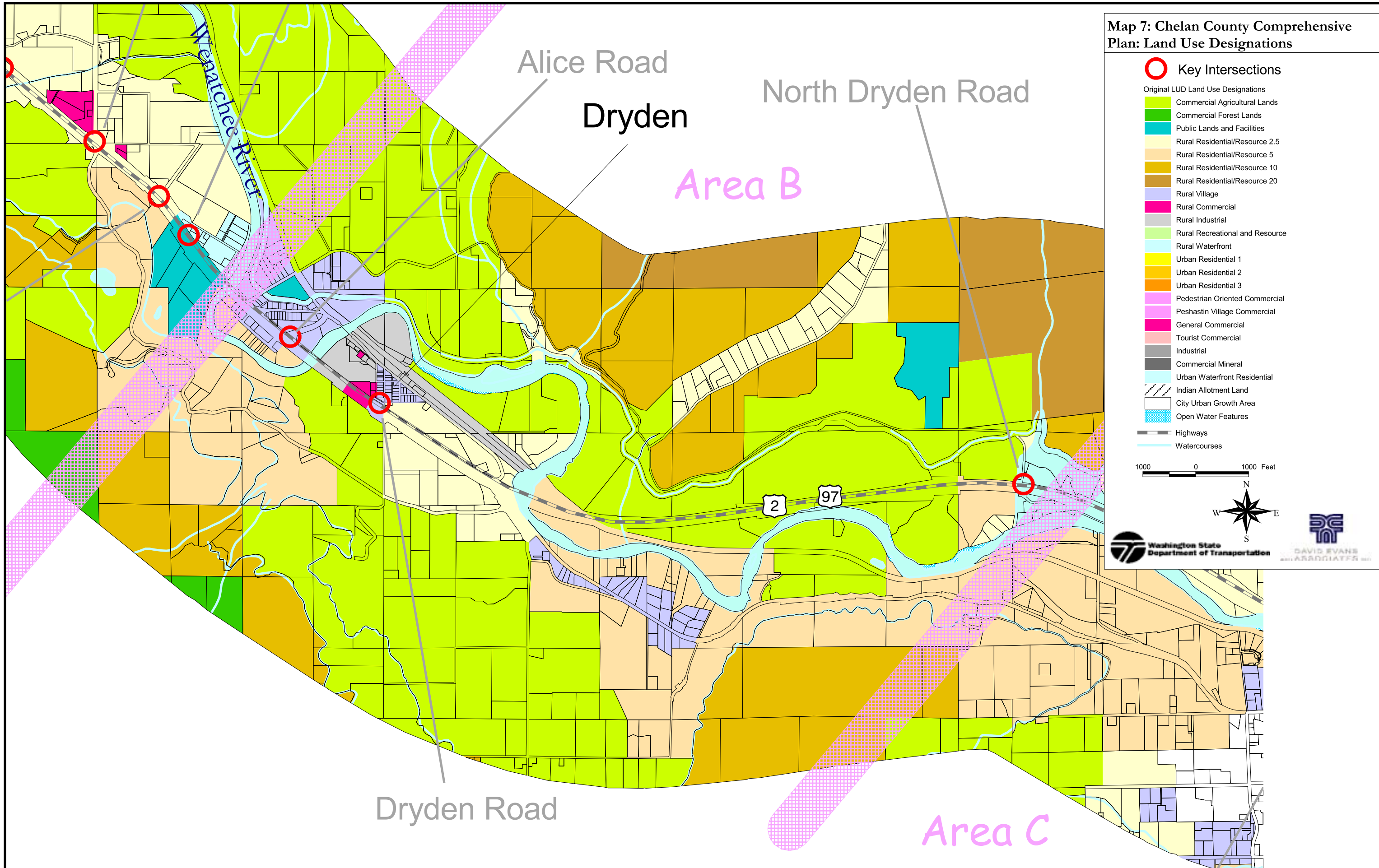
Map 6: Chelan County Comprehensive Plan: Land Use Designations

Area A

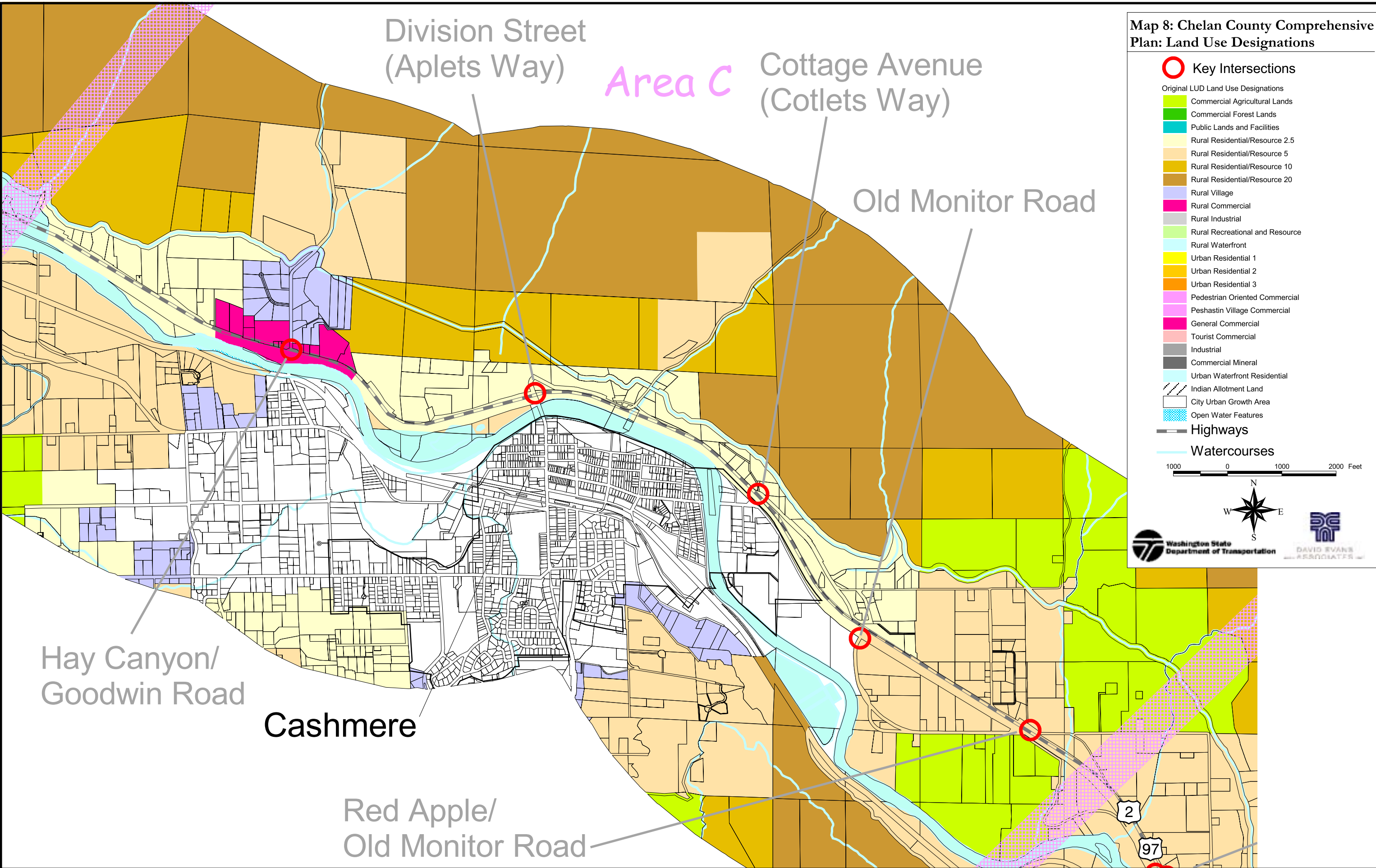
Area B



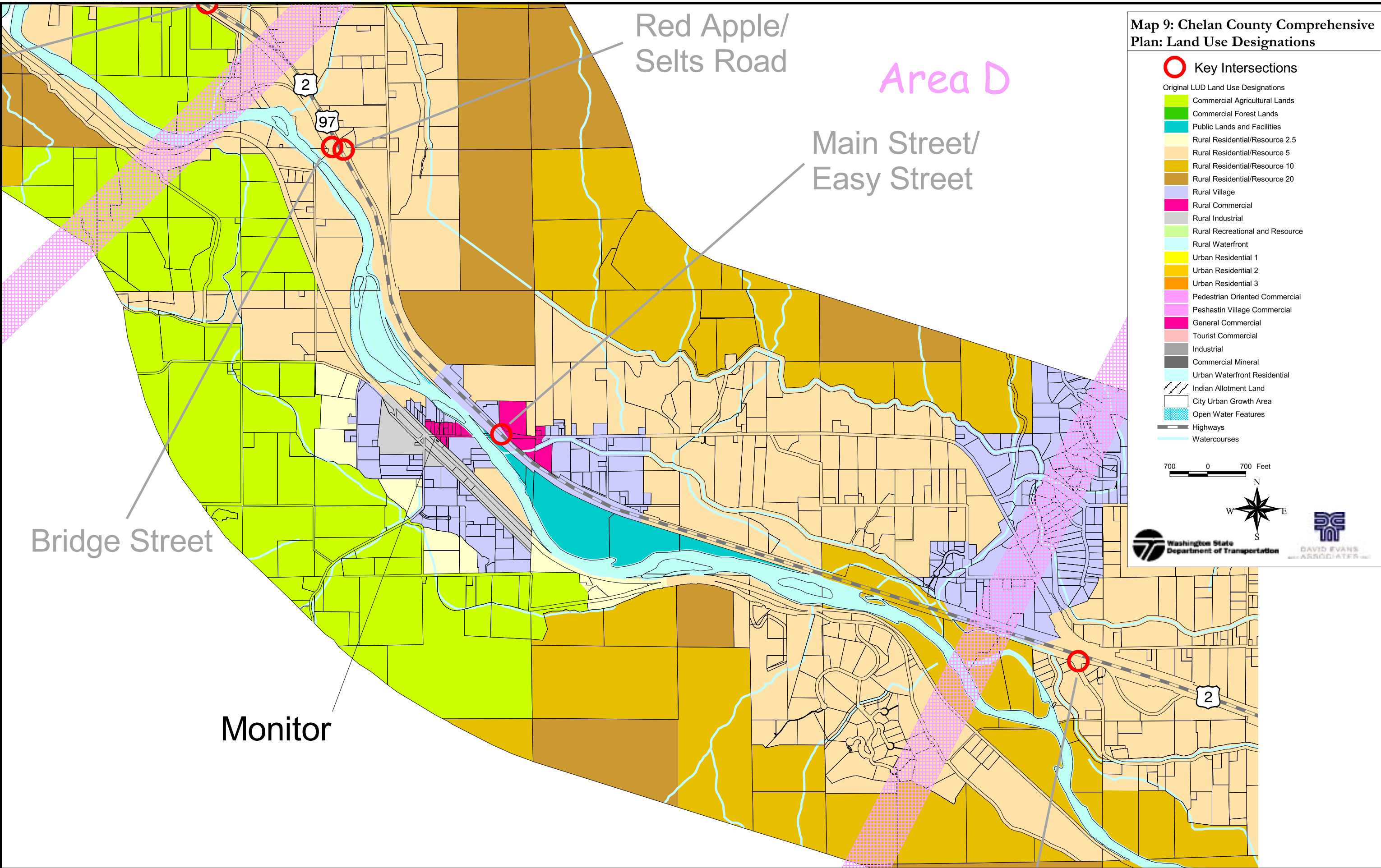
Map 7: Chelan County Comprehensive Plan: Land Use Designations



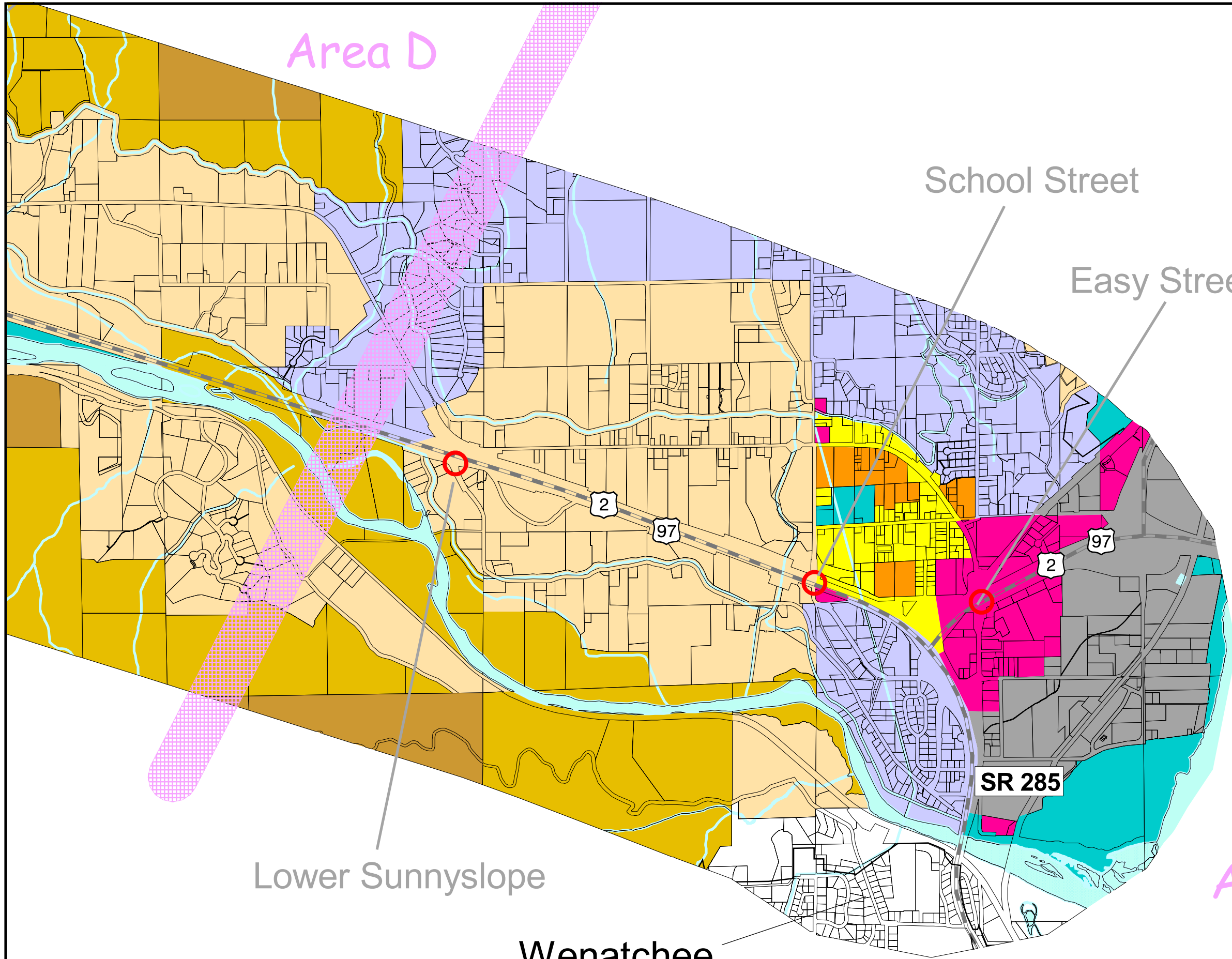
Map 8: Chelan County Comprehensive Plan: Land Use Designations



Map 9: Chelan County Comprehensive Plan: Land Use Designations



Map 10: Chelan County Comprehensive Plan: Land Use Designations



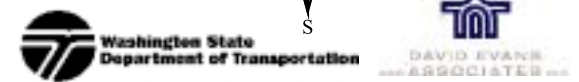
Key Intersections

Original LUD Land Use Designations

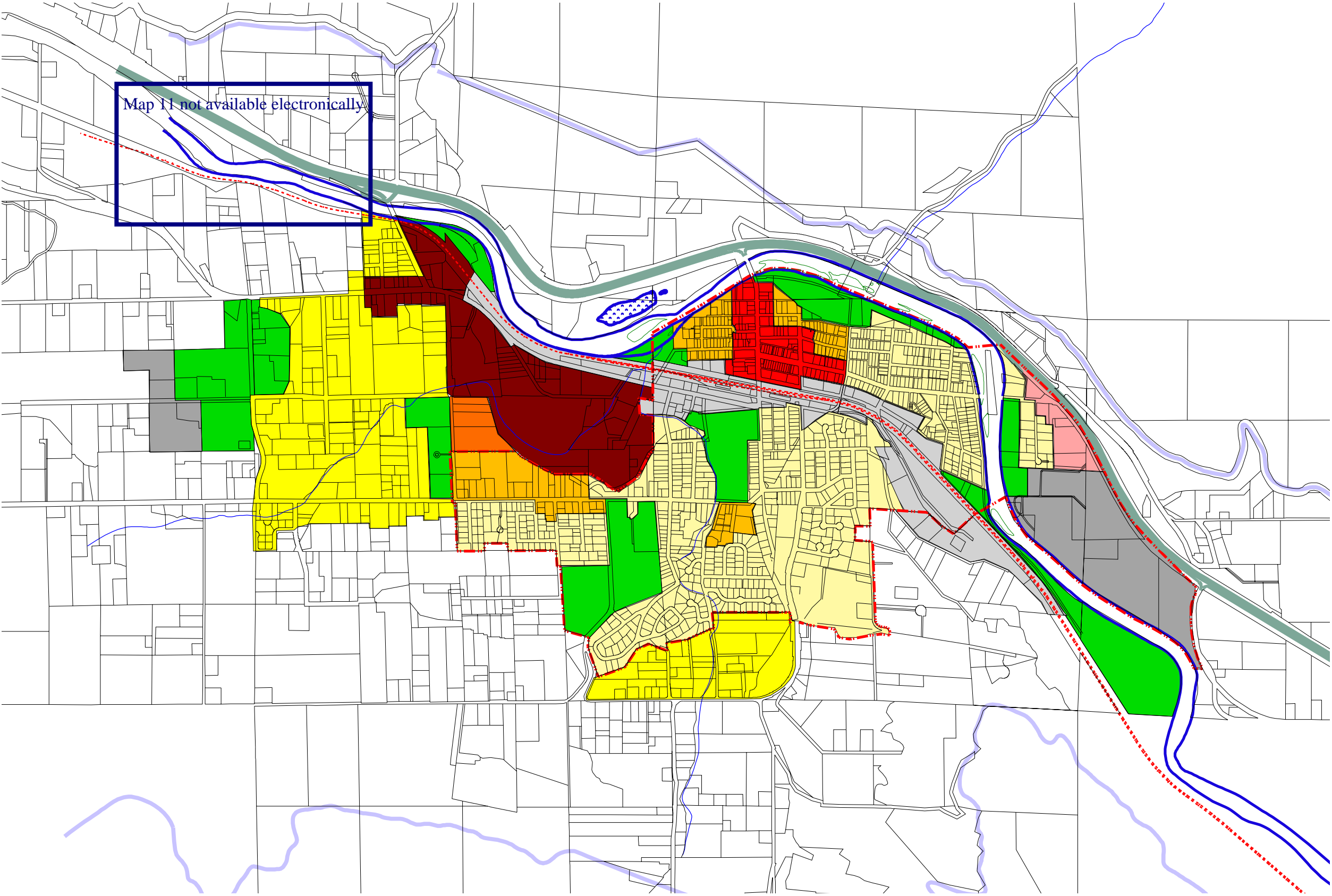
- Commercial Agricultural Lands
- Commercial Forest Lands
- Public Lands and Facilities
- Rural Residential/Resource 2.5
- Rural Residential/Resource 5
- Rural Residential/Resource 10
- Rural Residential/Resource 20
- Rural Village
- Rural Commercial
- Rural Industrial
- Rural Recreational and Resource
- Rural Waterfront
- Urban Residential 1
- Urban Residential 2
- Urban Residential 3
- Pedestrian Oriented Commercial
- Peshastin Village Commercial
- General Commercial
- Tourist Commercial
- Industrial
- Commercial Mineral
- Urban Waterfront Residential
- Indian Allotment Land
- City Urban Growth Area
- Open Water Features

Highways
Watercourses

1000 0 1000 Feet



Map 11. City of Cashmere Comprehensive Plan Land Use Designations



LEGEND

- Basemap Attributes**
- CANAL
 - CITYLIMIT
 - COUNTY-LOT
 - CREEK
 - HWY
 - ISLAND
 - LOT
 - RAILROAD
 - RIVER
- Cashmere Zoning & Land Use Designations**
- COMMERCIAL (C)
 - COMMERCIAL INDUSTRIAL (CI)
 - DOWNTOWN BUSINESS DISTRICT (DBD)
 - LIGHT INDUSTRIAL (LI)
 - MULTI-FAMILY (MF-1)
 - MULTI-FAMILY (MF-2)
 - PUBLIC (P)
 - SINGLE-FAMILY (SF-1)
 - SINGLE-FAMILY (SF-4)
 - WAREHOUSE (W)



DATA SOURCE: CITY OF CASHMERE, 2001



Hazardous Materials Database Search

The EPA database for hazardous materials was not searched as part of this report. There are no listed National Priorities List sites along the US 2/97 corridor (see Appendix A). However, in review of the Washington State Department of Ecology's (DOE) Hazardous Sites List (HSL) there are three listed hazardous waste sites (see Appendix A) within the study area. The sites are Cascade Helicopter, Cashmere Landfill and the Dryden Landfill. According to information listed on DOE's HSL website, Cascade Helicopter is currently undergoing their remedial action to clean up their property. The other two sites are waiting to begin the remedial action activity.

Miscellaneous Related Growth Issues

In researching these issues, no other related growth issues have come to the forefront.

Project Constraints

In review of the Land Use information no project constraints come to light. Anticipated improvements to US 2/97 will provide more limited access to the system. As this change occurs over time it can be expected that comprehensive plan amendments can be requested of the county. This could cause a shift from rural residential and agricultural uses to rural commercial oriented nodes, for example, at an interchange. This is not an actual constraint but may prove to be an interesting exercise when reviewing alternative locations for intersection/interchange and/or frontage road improvements.

JURISDICTIONAL SHORELINES

Following is information presented for the US 2/97 Corridor Safety Study to provide design and environmental analysis of potential safety, operation, and carrying capacity improvements for the 14.4-mile segment of US 2/97 from Blewett Junction to Easy Street, near Wenatchee. This section provides a discussion of the shoreline environments of the Wenatchee River along the corridor. Project feasibility and development constraints are identified for these facilities within the corridor.

Existing Conditions

In accordance with the State Shoreline Management Act (SMA), Chelan County and the City of Cashmere have adopted a Shoreline Master Program (SMP) for managing activities within local shoreline areas. Under the Shoreline Master Program four environments are defined for shoreline areas: Urban, Rural, Conservancy, and Natural. Each area has common characteristics, defined boundaries and specific regulations to govern use activities there. In the SMP these areas are defined as follows:

Urban Environment—An area of high intensity land use including residential, commercial, and industrial development in addition to open space and public uses.

Rural Environment — An area characterized by intensive agricultural and recreational uses and those areas having a high capability to support active agricultural practices and intensive recreational development.

Conservancy Environment — An area characterized by a potential for diffuse outdoor recreation activities, timber harvesting on a sustained yield basis, passive agricultural uses such as pasture and range lands, and other related development.

Natural Environment — an area containing some unique natural or cultural features considered valuable in a natural or original condition which are relatively intolerant of intensive human uses.

Shoreline environment designations are identified for the Wenatchee River, Peshastin Creek and Mission Creek in or near the project area in Designated Shoreline Maps 1 through 5.

Project Constraints

Consistent with SMA guidelines, the Shoreline Master Program defines local shoreline environments and specifies goals and policies for regulating activities within these areas. The Chelan County SMP includes the following provisions for roads in shoreline areas:

- Where permitted in shoreline areas, road alignments shall be set back from the ordinary high water line in a sufficient distance to leave a useable shoreline area in its natural condition unless it is technically and economically infeasible.
- Issuance of a permit for public roads shall be contingent upon provisions of adequate visual access to scenic vistas. Adequate visual access may include turn-outs, rest areas, and picnic areas.”
- Stream crossings to be used by the public shall be designed so as to meet the approval of the County Engineer or licensed structural engineer. All stream crossings must, in addition, be designed, located and constructed so as to provide access to more than one lot or parcel of property.

The SMP also indicates that “where unavoidable, and/or where necessary to cross a body of water, construction of public roads and bridges may be permitted” in the Urban, Rural, and Conservancy shoreline environments.

The Chelan County Zoning Ordinance indicates that the County has identified Frequently Flooded Areas as those areas located within the FEMA 100-year floodplain. The ordinance states that development within floodplain areas must comply with County regulations including the following setbacks for riparian buffers in shoreline environments:


Table 3-1. Designated Shoreline Classification and Buffers

Environment Classification	Buffer Width	
	High Intensity	Low Intensity
Natural	250 feet	200 feet
Conservancy	250 feet	200 feet
Rural	150 feet	100 feet
Urban	100 feet	75 feet

Project Feasibility

Construction activities in the more restrictive shoreline environments may not be feasible where potential encroachments may occur within the buffer areas noted above. Within sensitive shoreline environments, construction of new improvements may be restricted or prohibited by shoreline protection regulations. To the extent that these areas can be avoided, constraints posed by shoreline environmental designations are not likely to interfere with construction of the proposed US 2/97 improvements.

Map 1: Designated Shoreline Environment

 Key Intersections

Shorelines

 Conservancy

 Rural

 Urban

 Highways

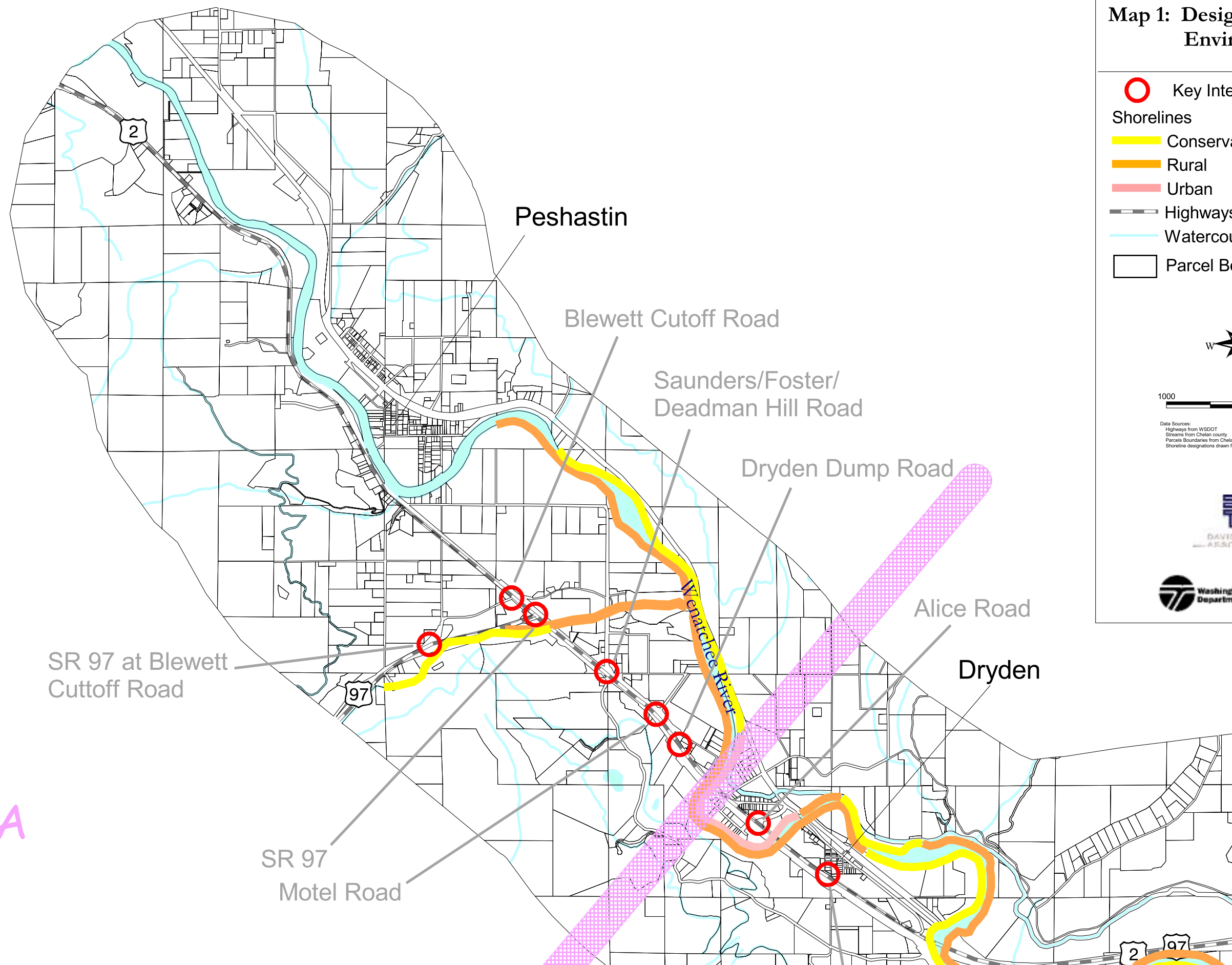
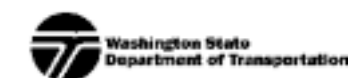
 Watercourses

 Parcel Boundaries



1000 0 1000 Feet

Data Sources:
Highways from WSDOT
Streams from Chelan county
Parcels Boundaries from Chelan county
Shoreline designations drawn from Chelan County Shoreline Master Program, 1994



Area A

SR 97
Motel Road

SR 97 at Blewett
Cutoff Road

Peshastin

Blewett Cutoff Road

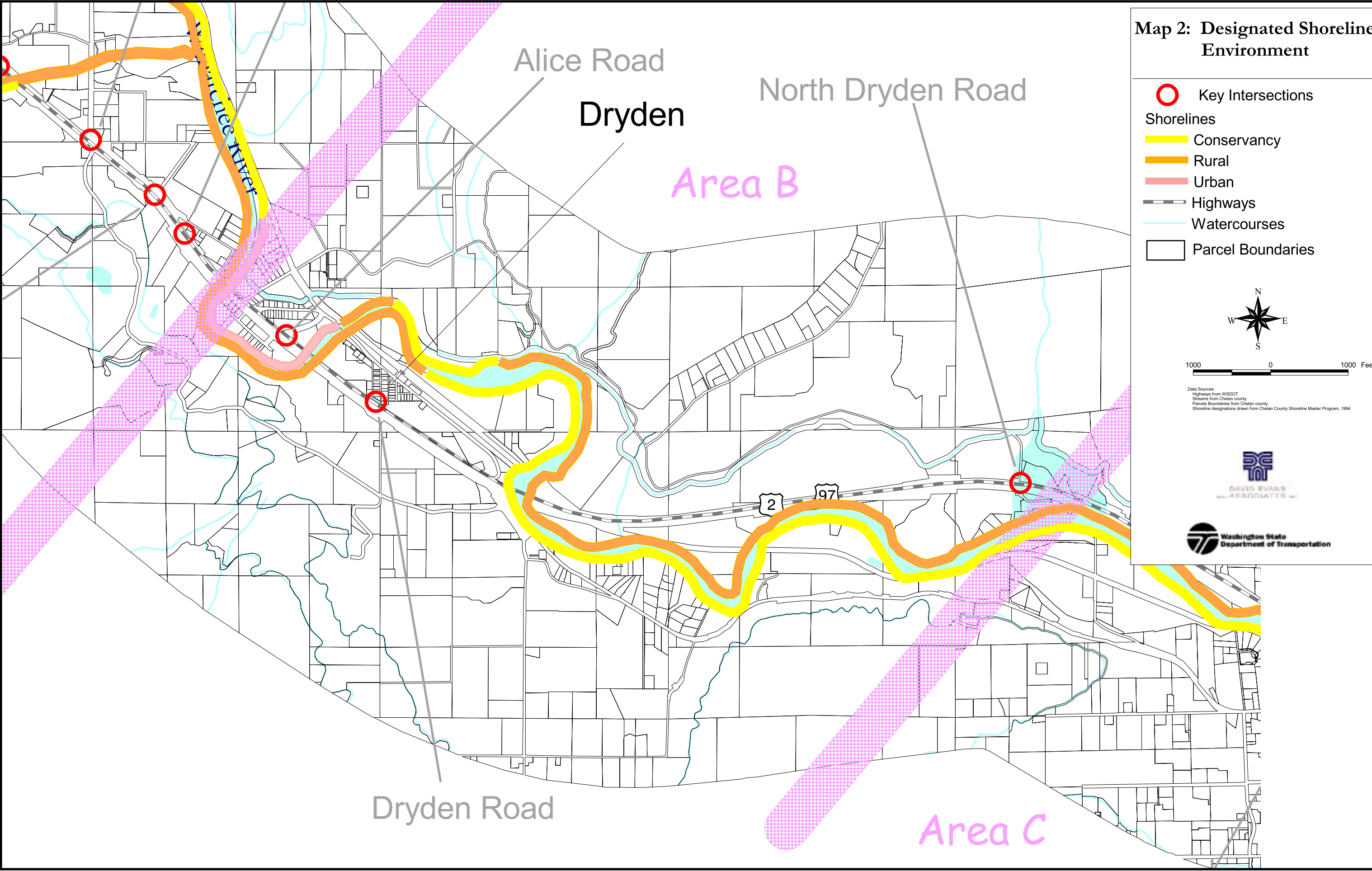
Saunders/Foster/
Deadman Hill Road

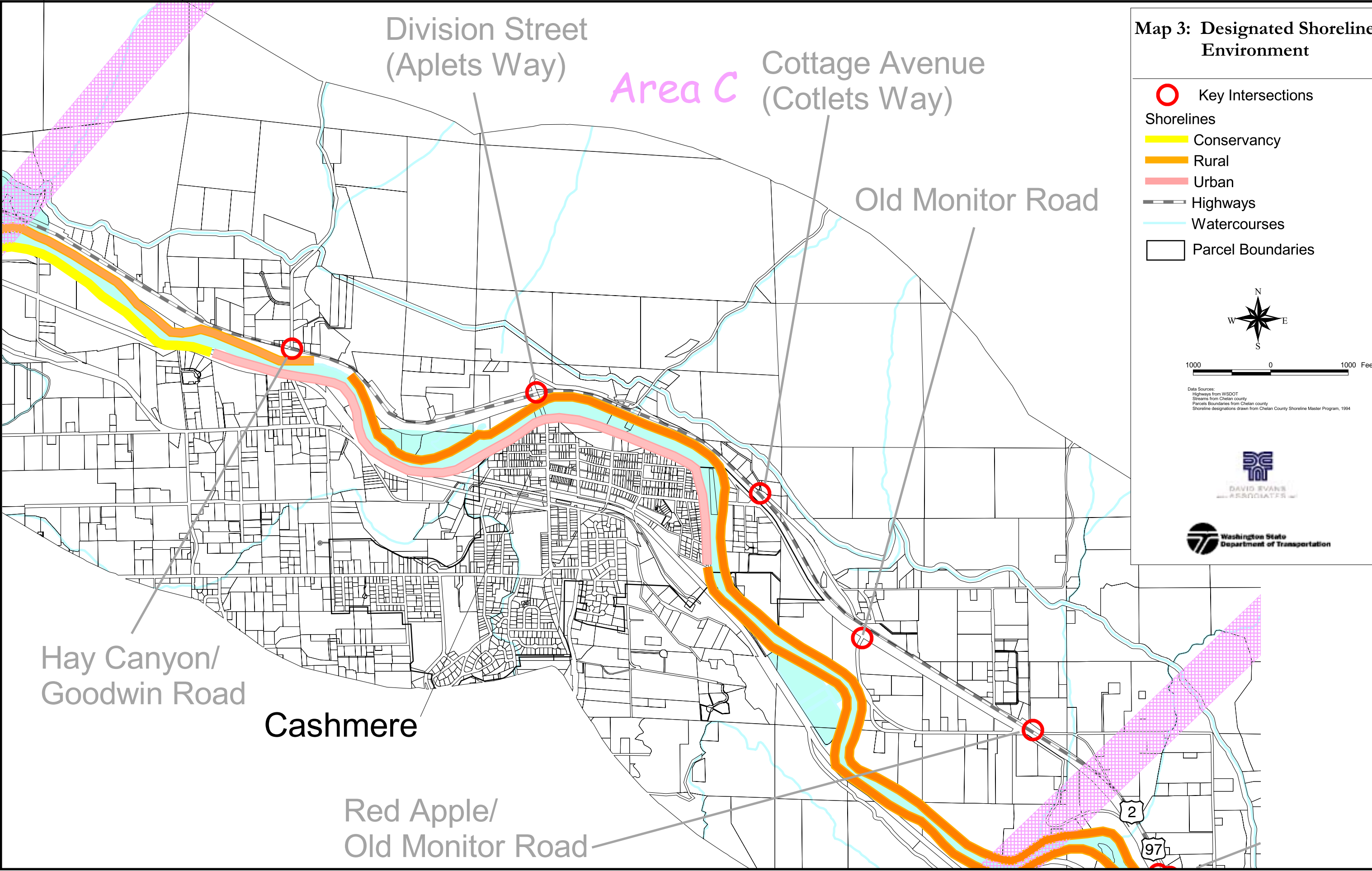
Dryden Dump Road

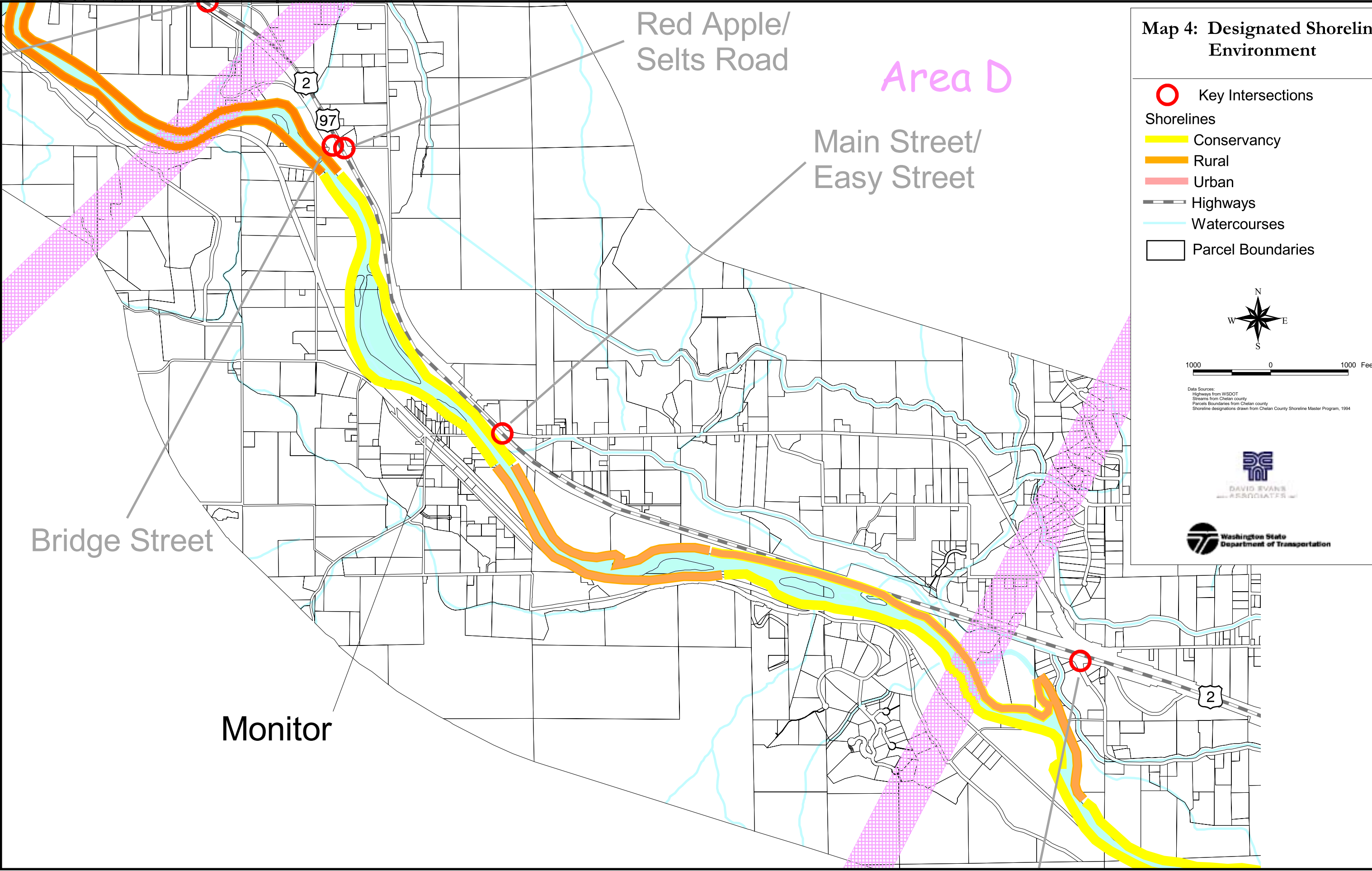
Alice Road

Dryden

Wenatchee River







Area D

School Street

Easy Street

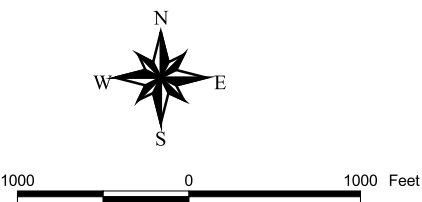
Lower Sunnyslope

Wenatchee

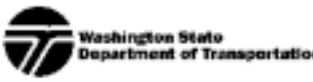
Area E

Map 5: Designated Shoreline Environment

- Key Intersections
- Shorelines
 - Conservancy
 - Rural
 - Urban
- Highways
- Watercourses
- Parcel Boundaries



Data Sources:
Highways from WSDOT
Streams from Chelan county
Parcels Boundaries from Chelan county
Shoreline designations drawn from Chelan County Shoreline Master Program, 1994



DESIGNATED FLOODPLAINS

Following is information presented for the US 2/97 Corridor Safety Study to provide design and environmental analysis of potential safety, operation, and carrying capacity improvements for the 14.4-mile segment of US 2/97 from Blewett Junction to Easy Street, near Wenatchee. This section provides a discussion of the 100-year floodplain of the Wenatchee River along the corridor. Project feasibility and development constraints are identified for these facilities within the corridor.

Existing Conditions

Much of the project corridor is located near the Wenatchee River. For most of the project area, the river follows the roadway's southern edge until it meanders to the north near Dryden. A small area of the corridor is also near Peshastin Creek at the junction of US 2/97 and Highway 97. Flooding can occur in Chelan County as a result of combined heavy snow accumulations in the mountains and heavy rains in the valleys and other low-lying areas. The 100-year floodplain is defined as the area that has a one percent probability of inundation in any given year. The following sections of the proposed project corridor are within the 100-year floodplain identified by U.S. Federal Emergency Management Act (FEMA) floodplain maps:

Peshastin Creek at the Highway 97/US 2 Junction
Wenatchee River approximately 0.1 miles west of Dryden
Wenatchee River approximately 0.4 miles east of Dryden
Wenatchee River at Applets Way in Cashmere
Wenatchee River approximately 2 miles east of Monitor

The 100-year floodplain within the project corridor is shown on FEMA Floodplain Maps 1 through 5.

Project Constraints

The Chelan County Zoning Code indicates that development activities within the 100 year floodplain must comply with the zoning code Sections 11.78 (Fish and Wildlife Habitat Conservation Overlay District) and 11.80 (Wetland Areas Overlay District), and the standards in Chapter 3.20 (Flood Hazard Development) of the Chelan County Code. The primary restrictions identified within the zoning code are those pertaining to the provisions of riparian buffer areas as identified in the Shorelines discussion. Regarding roadways in habitat areas, the Zoning Code notes that:

“Proposed roads within riparian buffers shall be kept to a minimum and should not run parallel to the water body. Crossings, where necessary, shall cross riparian buffers at as near right angles as possible. If no alternative exists to placing a roadway within a buffer, the Administrator may require a Habitat Management Plan pursuant to Section 11.78.100, adequate to avoid degradation of the riparian habitat functions, structure and value utilizing the criteria in Section 11.78.080 (1.C.1-7) in reaching a conclusion. Water crossings must be approved by the Washington State Department of Fish and Wildlife in accordance with RCW 75.20.100.”

Under Chapter 3.20 of the County Code, a development permit is required for construction or development of all structures, fill, and other activities within the flood hazard area. The permit application would be subject to administrative review by Chelan County. As noted in the Code, new construction and substantial improvements should use methods and practices that minimize flood damage and materials that are flood resistant. Nonresidential construction is required to elevate the lowest floor

one foot higher than the base flood elevation, or alternatively, must be flood-proofed and have structural components capable of resisting hydrostatic and hydrodynamic loads. This construction would also require approval by a registered professional engineer or architect.

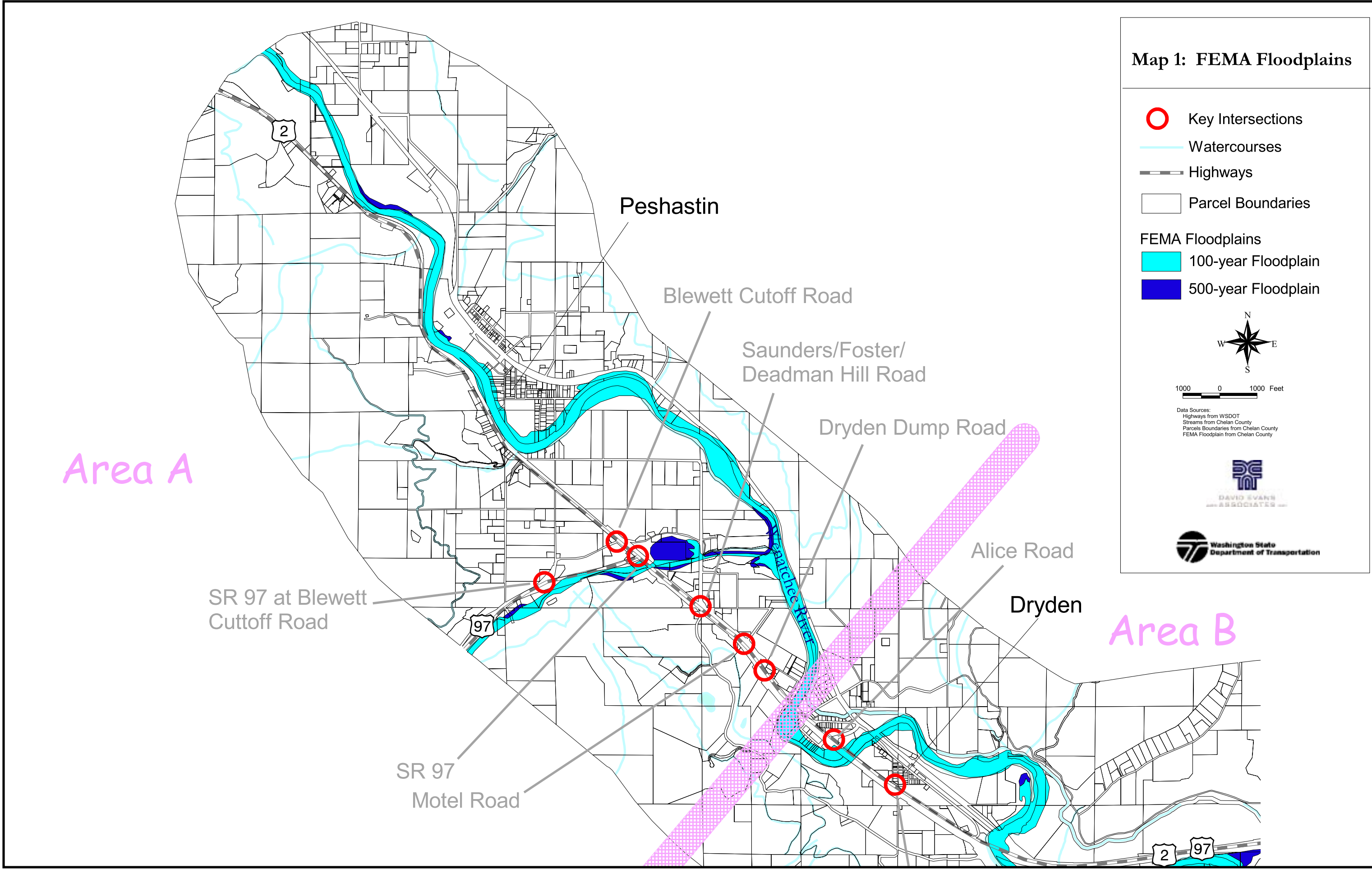
Furthermore, Section 3.20.220, Grading and Filling, indicates:

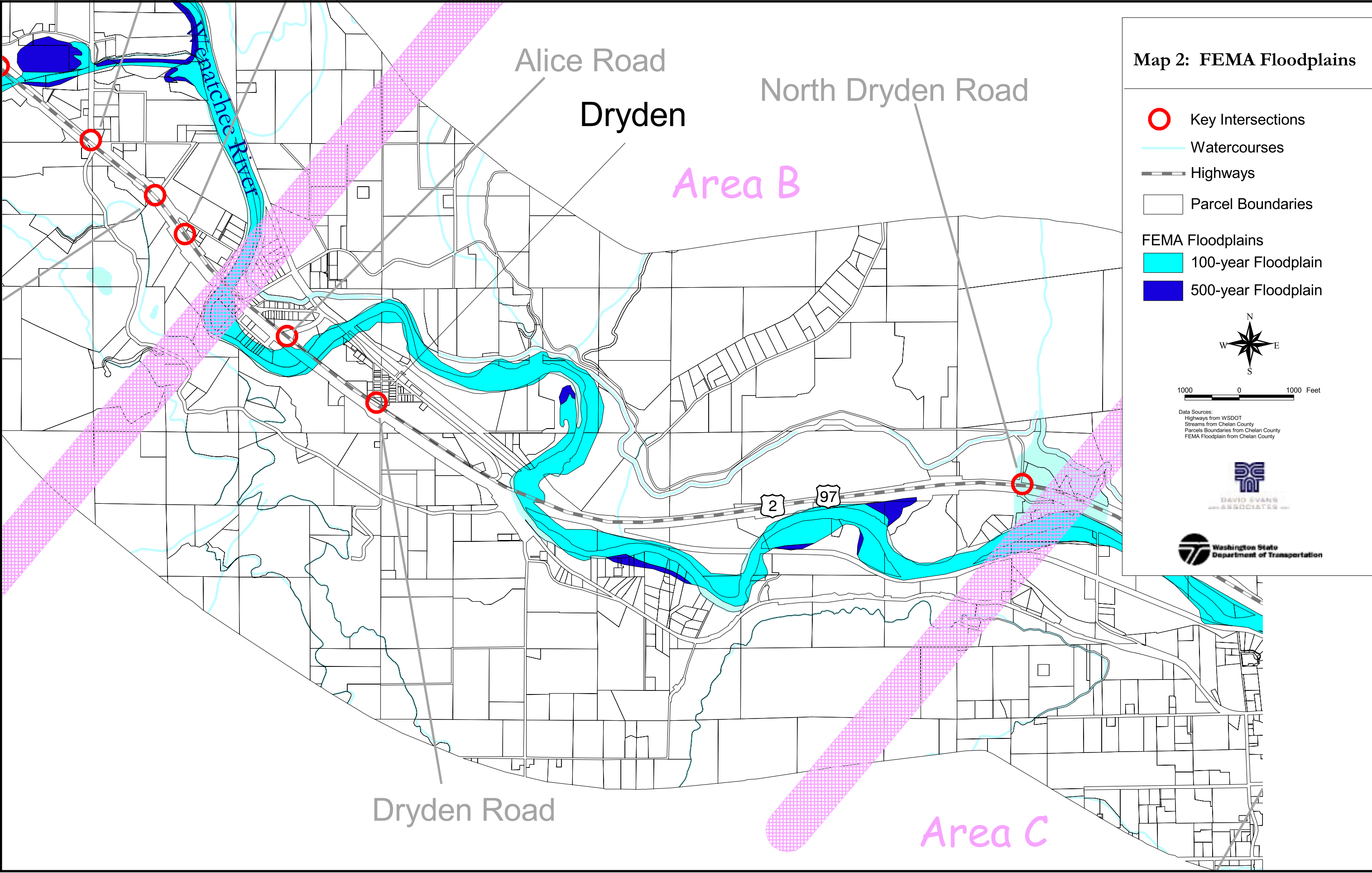
“No fill, including fill for roads, and levees; grading; or excavating that unduly affects the efficiency or the capacity of the channel or floodway, or unduly decreases flood storage or increases flood heights, shall be permitted. Any fill proposed to be deposited in a flood hazard area shall not be contrary to the need for storage of floodwater nor shall the amount of fill proposed be greater than is necessary to achieve the purpose for which the fill is intended. Fill materials shall be clean with a minimal potential for degrading water quality. All fill materials shall be protected against erosion with retaining walls or other mechanisms to deter erosions. If vegetative cover is chosen, the side slopes of the fill shall not exceed two units of horizontal distance to one unit of vertical distance.”

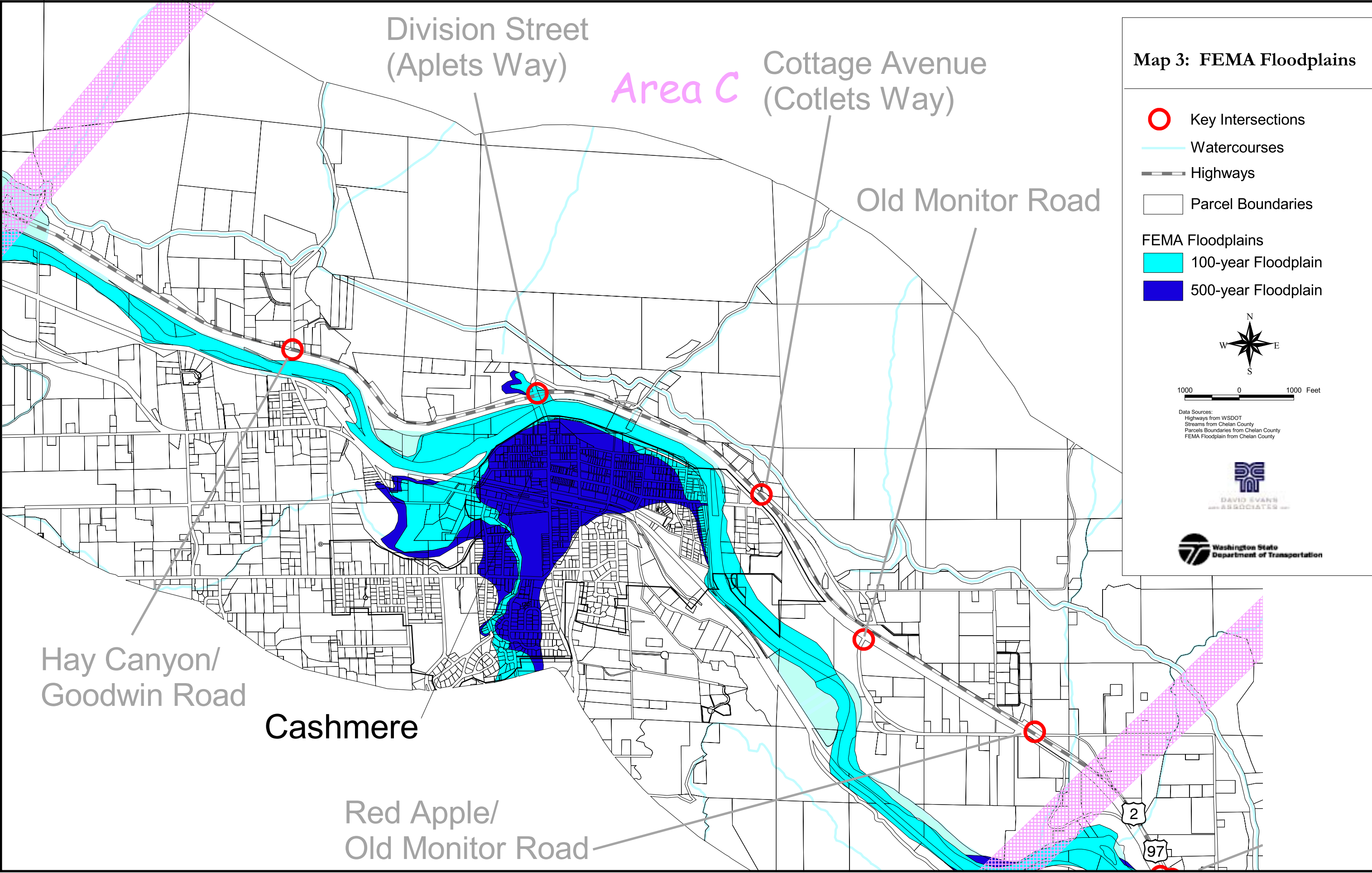
Thus, construction activities associated with the proposed project would be subject to these conditions and some activities may be precluded where floodplain areas cannot be avoided.

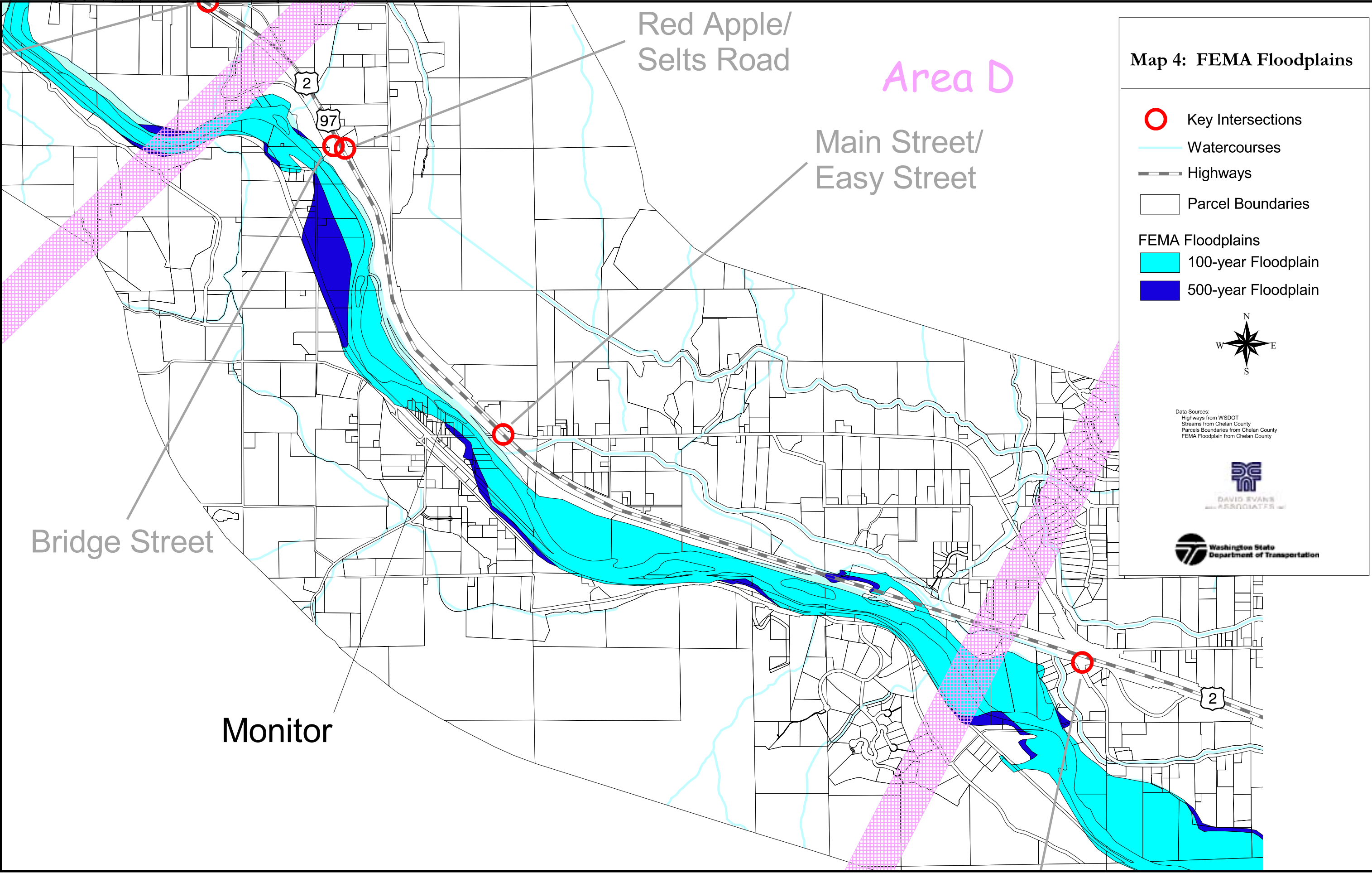
Project Feasibility

Construction activities that cannot meet the floodplain provisions described above may be prohibited. The combined and overlapping regulations regarding floodplains, habitat and wetland areas may result in a number of site-specific restrictions on potential project-related activities. Additional evaluation would be required for site-specific activities that may be affected under these regulations.









Area D

School Street

Easy Street

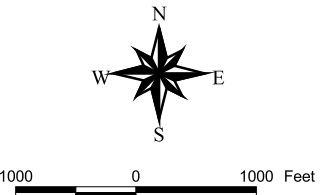
Lower Sunnyslope

Wenatchee

Area E

Map 5: FEMA Floodplains

- Key Intersections
- Watercourses
- Highways
- Parcel Boundaries
- FEMA Floodplains
 - 100-year Floodplain
 - 500-year Floodplain



Data Sources:
Highways from WSDOT
Streams from Chelan County
Parcels Boundaries from Chelan County
FEMA Floodplain from Chelan County



PARKS AND RECREATION

Following is information presented for the US 2/97 Corridor Safety Study to provide design and environmental analysis of potential safety, operation, and carrying capacity improvements for the 14.4-mile segment of US 2/97 from Blewett Junction to Easy Street, near Wenatchee. This section provides a discussion of parks and recreation facilities located throughout the corridor. Project feasibility and development constraints are identified for these facilities within the corridor.

Existing Conditions

There are two public parks along the proposed project corridor:

Riverside Park in the City of Cashmere is a 7.32 acre park along the Wenatchee River on the south side of US 2/97. This park provides river access, playground facilities and picnic sites.

Wenatchee River County Park is located just east of the City of Monitor on the south side of US 2/97. This County-owned park provides 17 acres adjacent to the Wenatchee River and includes 98 campsites for recreational vehicles and tents.

Other important recreational facilities in the area include the county fairgrounds and museum. The Chelan County Fairgrounds are located one mile west of Cashmere on Old Sunset Highway to Westcott Drive. The fairgrounds are on a 40-acre site with over 1,200 parking spaces and 300 RV hook-ups. The Chelan County Fair is held at the fairgrounds annually, the weekend after Labor Day, and these facilities are also used for off-season community events.

The Chelan County Historical Museum is located at 600 Cottage Avenue in Cashmere. This facility provides exhibits related to the natural and anthropological history of the Cashmere Valley. The museum grounds also contain a pioneer village and the museum hosts many special events and living history programs.

Also within the project corridor, the access road to Peshastin Pinnacles State Park is reached via US 2/97 approximately two miles west of Cashmere. This 135-acre park is a popular hiking and rock-climbing destination.

Because of its scenic qualities, US 2/97 has been designated as a state scenic byway. This designation acknowledges several intrinsic qualities along the route including archaeological, cultural, historic, natural, recreational, and scenic values. Year around recreational opportunities provided by the route include white-water rafting, hiking, skiing, and auto touring. While this designation does not provide formal regulations regarding these activities at this time, WSDOT and local citizens have begun long range plans to protect the corridor and promote its importance to the region.

In connection with these efforts, the Steven's Pass Greenway Corridor Management Plan was prepared in 1999-2000. This Plan includes goals and policies to protect the roadway's intrinsic values, including the recreational activities noted above. The long-range goal is to achieve National Scenic Byway status for the entire corridor from Everett to Wenatchee. The initial efforts reflected by the Corridor Management Plan focus on the area between Everett and Leavenworth, however, the plan also includes measures to protect and promote important qualities of the eastern corridor.

Among the many goals to promote the corridor, is a plan to provide a multimodal trail along the corridor between Everett and Wenatchee. There are also plans to provide interpretive signs about local history, to minimize incompatible land uses and visual intrusions along the highway, encourage open space on private land, protect vegetative screening along the roadway, and to promote overall recreational, scenic, and tourism opportunities in the corridor.

Project Constraints

Under Section 4(f) of the Department of Transportation Act of 1966, federally funded projects are prohibited from using land from a significant publicly owned park, recreation area, wildlife or waterfowl refuge, or from a significant historical site. As indicated by Section 4(f), acquisition of park and recreation lands must be avoided unless no other practical or feasible alternatives are available. Activities associated with improvements to US 2/97, such as construction of new interchanges, new intersections, or secondary roads that may require acquisition of land adjacent to the existing roadway, could be subject to Section 4(f) regulations where potential impacts on Riverside Park and Wenatchee River County Park may occur.

In addition to direct acquisition of park properties in the project area, indirect impacts may require consideration, particularly during potential construction activities. The most likely indirect impact to recreational resources in the project area would concern impacts on access to local facilities. As indicated above, the most significant community facilities reached via US 2/97 in the project area are the County fairgrounds and the County museum. Additionally, the Peshastin Pinnacles State Park may also be reached from US 2/97 and could be affected by potential impediments to access, or temporary road closures, during construction periods.

Local community parks and recreational facilities such as city parks within Cashmere may also be affected although it is expected that these facilities are primarily used by local residents and that, with the exception of the two parks identified above, regional use of the smaller town parks is not great.

Additionally, the efforts to protect recreation and other values associated with the scenic byway designation will require coordination with numerous agencies responsible for guiding actions within the overall US 2/97 corridor. Measures to protect existing recreational resources and strengthen their relation to the highway, may require modifications of some potential US 2/97 improvement activities to assure their compatibility with the Steven Pass Greenway goals.

Project Feasibility

Generally, consideration of the above- mentioned park and recreational facilities does not appear to prevent construction of potential US 2/97 improvements, this may not be true for all potential activities within the project area. In particular, activities adjacent to the two existing parks near the roadway may be prevented by Section 4(f) requirements. In the long-term, local and regional recreational facilities would be expected to benefit from improved access as a result of potential operational, capacity, and/or safety improvements to US 2/97.

ARCHAEOLOGICAL RESOURCES AND HISTORIC STRUCTURES ARCHIVAL REVIEW, CHELAN COUNTY, WASHINGTON

INTRODUCTION

David Evans and Associates, Incorporated, retained Larson Anthropological Archaeological Services Limited (LAAS) in March 2001 to conduct an archaeological resources and historic structures archival review for the proposed US 2/97 Corridor Safety Study, Chelan County, Washington. The Washington State Department of Transportation (WSDOT) proposes improvements to a 14.4-mile segment of US 2/97 to increase safety and carrying capacity along the route. The proposed US 2/97 Corridor Safety Study traverses Sections 3, 4, 10, 11, 13, and 14, Township 23 North, Range 19 East, Sections 18, 19, 20, and 21, Township 23 North, Range 20 East, Sections 21, 27, 35, and 36, Township 24 North, Range 18 East, and Sections 31, 32, 33, Township 24 North, Range 19 East. LAAS conducted the archival review to support screening for the planning process for the proposed US 2/97 Corridor Safety Study. The archival review addressed known hunter-fisher-gatherer and historic period archaeological sites within the project area, and historic structures located within 0.25 miles because their viewshed may be affected by improvements for the proposed US 2/97 Corridor Safety Study. LAAS conducted no field assessment or tribal consultation for this effort.

PROJECT DESCRIPTION

The US 2/97 Corridor Safety Study area begins near Blewett Junction, near the US 2/97/SR 97 junction, approximately one mile southeast of the town of Peshastin. The project area continues west along US 2/97 in proximity to the towns of Dryden, Monitor, Cashmere, and Sunnyslope, and terminates at Easy Street, near the US 2/97 and US 2/9785 intersection, approximately one mile northwest of the confluence of the Wenatchee and Columbia Rivers, north of Wenatchee. The proposed US 2/97 Corridor Safety Study includes possible improvements to five project subareas: A) Blewett Junction, B) Dryden, C) Cashmere, D) Monitor, and E) Sunnyslope. WSDOT proposes to improve the entire corridor, however, the majority of the proposed action alternatives would include changes to existing intersections along the route. Various improvements along US 2/97 from Blewett Junction to Easy Street may include: taking no action, providing channelization improvements to a non-signalized intersection, constructing a signalized intersection, constructing a grade separated interchange to replace the intersection, constructing a grade separated interchange at an alternate location, constructing a secondary road network, constructing a pedestrian overcrossing or undercrossing, restricting turning movements at an intersection, closing an intersection, and adding U-turn opportunities.

METHODOLOGY

LAAS examined documents on file at the Washington State Office of Archaeology and Historic Preservation (OAHP), including topographic maps, previous cultural resources studies, nominations to the National Register of Historic Places, Determination of Eligibility for the National Register of Historic Places Forms, Washington State Archaeological Site Inventory Forms, and National Register of Historic Places Nomination Inventory Forms for Historic Structures. No fieldwork, ethnohistoric or ethnographic research, or tribal consultation was conducted for this archaeological resources and historic structures archival review. The archival review addressed known hunter-fisher-gatherer and historic period archaeological sites within the project area, and historic structures located within 0.25 miles because their viewshed may be affected by improvements for the proposed US 2/97 Corridor Safety Study. LAAS compiled a list of known hunter-fisher-gatherer and historic period archaeological sites within the project area and historic structures within 0.25 miles of the project area and determined the extent to

which the project area had been surveyed for those resources. LAAS gathered location information and researched National Register of Historic Places (NRHP) evaluation status.

ARCHAEOLOGICAL RESOURCES AND HISTORIC STRUCTURE ARCHIVAL REVIEW

ARCHAEOLOGICAL STUDIES

Five cultural resources studies have been conducted in the US 2/97 Corridor Safety Study area (**Table 6-1**). Lentz (1995) surveyed historic structures only. The four remaining cultural resources studies assessed hunter-fisher-gatherer or historic period archaeological resources (Holstine 1997, Regan 1990, Rice 1986, Welch 1978). Less than one mile (6.9 percent) of the 14.4-mile segment of the US 2/97 Corridor Safety Study area has been surveyed and no archaeological resources were identified within the project area.

Table 6-1. Previous Cultural Resources Studies Within 0.25 Miles of the US 2/97 Corridor Safety Study Area

Author	Date	Type of Study	Cultural Resources Identified	NRHP ¹ Status	Legal Description ² of Study Area			Area Name
					T	R	S	
Welch	1978	Archival Review	None	None	24N	18E	26, 27	(B) Dryden
Rice	1986	Field Inspection	None	None	23N	20E	21, 28	(E) Sunnyslope
Regan	1990	Field Inspection and Shovel Probes	None	None	23N	19E	3	(C) Cashmere
Lentz	1995	Historic Structures Inventory	8 Historic Structures	Not Evaluated	23N	19E	3, 4, 10, 11, 13, 14	(A) Blewett Junction, (B) Dryden, (C) Cashmere, (D) Monitor, and (E) Sunnyslope
					23N	20E	18, 19, 20, 21	
					24N	18E	21, 27, 35, 36	
					24N	19E	31, 32, 33	
Holstine	1997	Field Inspection	None	None	23N	19E	13	(D) Monitor

¹ NRHP - National Register of Historic Places

² Legal Description: T - Township

R - Range

S - Section

One archaeological site is recorded within 0.25 miles of US 2/97 from Blewett Junction to Easy Street (**Table 6-2**). The Cashmere Burial site (45CH311) contained a single Indian juvenile burial (Welch 1987). Although the burial is 0.25 miles from the project area, we include it now to avoid confusion in the future about burial locations in the project area.

Table 6-2. Archaeological Sites Within 0.25 Miles of the US 2/97 Corridor Safety Study Area

Author	Date	Site Name	Site Number	NRHP ¹ Status	Legal Description ²			Area Name
					T	R	S	
Welch	1987	Cashmere Burial	45CH311	Not Eligible	24N	19E	32	(C) Cashmere

¹ NRHP - National Register of Historic Places

² Legal Description: T - Township

R - Range

S - Section

A review of the US 2/97 right-of-way plans by the project engineering team has identified an Indian Cemetery located in the SW1/4 of the NW 1/4, Section 3, Township 23 North, Range 19 East, Willamette Meridian. This site is not included in the maps provided by the OAHF. Further research of this issue is out of the current project scope. It is recommended that this site should be researched for more detail before the 30 percent design is developed..

HISTORIC STRUCTURES STUDIES

Lentz (1995) surveyed all historic structures in the US 2/97 Corridor Safety Study area (Table 1), however, only transportation-associated structures, primarily automobile transportation, were surveyed for this inventory. The survey does not consider other structures, such as residential or industrial properties, within the study area. In 1979, Soderberg conducted a Washington State Bridge Inventory. Soderberg (1979a, 1979b, 1979c, 1979d, 1979e) surveyed five historic bridges in the US 2/97 Corridor Safety Study area. Duvauchelle (1993a, 1993b, 1995) surveyed three residences within 0.25 miles of the Cashmere project subarea. Wilson (1974) inventoried the Graham (Cap) House, however, the location of the historic structure cannot accurately be determined because no map was provided. The Graham (Cap) House may be within 0.25 miles of the US 2/97 Corridor Safety Study area.

Nineteen inventoried historic structures may have the project within their viewsheds (**Table 6-3**). Eight of these structures were inventoried by Lentz (1995) for the transportation-associated structure survey. Three historic structures, West Monitor Bridge (45CH293H), Pioneer Village (45CH236H), and the Captain Stoffel Waterwheel, are listed in the National Register of Historic Places (NRHP). Three historic structures have been determined not eligible for listing in the NRHP and 13 have not been evaluated.

Table 6-3. Historic Structures Within 0.25 Miles of the US 2/97 Corridor Safety Study Area

Author	Date	Type of Resource	Inventory Number	NRHP ¹ Status	Legal Description ²			Area Name
					T	R	S	
Anonymous	1973	Captain Stoffel Waterwheel	None	Listed	23N	19E	4	(C) Cashmere
Wilson	1973	Pioneer Village (45CH236H)	None	Listed	23N	19E	4	(C) Cashmere
Wilson	1974	Graham (Cap) House	None	Not Evaluated	-	-	-	(C) Cashmere
Soderberg	1979a	Dryden Bridge	406	Not Evaluated	24N	18E	27	(B) Dryden
Soderberg	1979b	Monitor Bridge	305	Not Evaluated	23N	19E	14	(D) Monitor
Soderberg	1979c	Peshastin Creek - Sanders Bridge	408	Not Evaluated	24N	18E	21	(A) Blewett Junction
Soderberg	1979d	West Cashmere Bridge	401	Not Evaluated	24N	19E	32	(C) Cashmere
Soderberg	1979e	West Monitor Bridge (45CH293H)	306	Listed	23N	19E	11	(D) Monitor

Author	Date	Type of Resource	Inventory Number	NRHP ¹ Status	Legal Description ²			Area Name
					T	R	S	
Duvauchelle	1993a	Residence	None	Determined Not Eligible	23N	19E	4	(C) Cashmere
Duvauchelle	1993b	Residence	None	Determined Not Eligible	24N	19E	4	(C) Cashmere
Duvauchelle	1995	Residence	None	Determined Not Eligible	24N	19E	32	(C) Cashmere
Lentz	1995	Monitor Drive-In	EC3-48	Not Evaluated	23N	19E	13	(D) Monitor
Lentz	1995	Rusty's Drive-In	EC3-50	Not Evaluated	23N	19E	4	(C) Cashmere
Lentz	1995	201 Building	EC3-51	Not Evaluated	23N	19E	4	(C) Cashmere
Lentz	1995	Auto Camp	EC3-52	Not Evaluated	24N	19E	33	(C) Cashmere
Lentz	1995	Sunset Tire	EC3-55	Not Evaluated	24N	19E	32	(C) Cashmere
Lentz	1995	Sunset Machine	EC3-56	Not Evaluated	24N	19E	32	(C) Cashmere
Lentz	1995	Mt. Vue Drive In Theatre	EC3-57	Not Evaluated	24N	18E	36	(B) Dryden
Lentz	1995	Valley Cottage Motel	EC3-58	Not Evaluated	24N	18E	35	(B) Dryden

¹ NRHP - National Register of Historic Places ² Legal Description: T - Township R - Range S - Section

BIBLIOGRAPHY

Anonymous

- 1973 *Captain Stoffel Waterwheel*. National Register of Historic Places Inventory - Nomination Form. Washington State Office of Archaeological and Historic Preservation Inventory Form. On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.

Duvauchelle, Burrelle

- 1993a *210 North Douglas*. Determination of Eligibility for the National Register of Historic Places Form. On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.
- 1993b *502 Cottage*. Determination of Eligibility for the National Register of Historic Places Form. On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.
- 1995 *5968 Sunset Highway*. Determination of Eligibility for the National Register of Historic Places Form. On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.

Holstine, Craig

- 1997 *US 2/97: Monitor to Sunnyslope Project*. Letter Report DOT97-21, Archaeological and Historical Services, Eastern Washington University.

Lentz, Florence K.

- 1995 *An Inventory and Evaluation of Historic Properties Associated with Transportation in Washington State*. Submitted to the Washington State Office of Archaeology and Historic Preservation, Washington State Department of Community, Trade and Economic Development. Eastern Washington University Reports in Archaeology and History 100-90, Archaeological and Historical Services.

Regan, Dennis

- 1990 *City of Cashmere Proposed Wastewater Pretreatment Plant, Chelan County, Washington*. Short Report SR-231, Archaeological and Historical Services, Eastern Washington University.

Rice, Harvey S.

- 1986 *A Survey for Cultural Resources on US 2/97, Sunnyslope Interchange Near Wenatchee, Chelan County, Washington*. Short Report DOT86-26. Prepared for WSDOT's Task Assignment Document 87 Under Contract No. Y-3240. Archaeological and Historical Services, Eastern Washington University, Cheney.

Soderberg, Lisa

- 1979a *Dryden Bridge No. 406*. Washington State Office of Archaeological and Historic Preservation Inventory Form. On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.

- 1979b *Monitor Bridge No. 305. Washington State Office of Archaeological and Historic Preservation Inventory Form.* On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.
- 1979c *Peshastin Creek - Sanders Bridge No. 408. Washington State Office of Archaeological and Historic Preservation Inventory Form.* On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.
- 1979d *West Cashmere Bridge No. 401. Washington State Office of Archaeological and Historic Preservation Inventory Form.* On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.
- 1979e *West Monitor Bridge Site (45CH293H) No. 306. Washington State Archaeological Site Inventory Form.* On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.

Welch, Jeanne M.

- 1978 *Dryden Facility Plan.* Letter to Public Utility District No. 1 of Chelan County, Wenatchee, Washington. Dryden Facility Plan. 30 August. On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.

Welch, S.

- 1987 *Cashmere Burial (45CH311).* *Washington State Archaeological Site Inventory Form.* On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.

Wilson, James

- 1973 *Pioneer Village. National Register of Historic Places Inventory - Nomination Form.* On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.
- 1974 *Graham (Cap) House. Washington State Inventory of Historic Places Form.* On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.

PRELIMINARY ENVIRONMENTAL REVIEW TECHNICAL MEMORANDUM FOR WETLANDS, VEGETATION, WILDLIFE, FISHERIES, AND THREATENED/ENDANGERED SPECIES

1.0 Introduction and Methods

This report combines the technical memoranda for preliminary environmental review of wetlands, vegetation, wildlife, and fisheries for proposed improvements to US 2/97 intersections from milepost (MP) 104.72 to 119.13. This review discusses the five areas defined by the Washington State Department of Transportation (WSDOT). Each area is defined by several intersections that have been specified by WSDOT for possible improvements (**Table 7-1**).

Table 7-1. Assessment Areas and Key Intersections

AREA A Blewett Junction	AREA B Dryden	AREA C Cashmere	AREA D Monitor	AREA E Sunnyslope
SR 97	Alice Road	Cottage Avenue (Cotlets Way)	Bridge Street	Easy Street
Blewett Cutoff Road	Dryden Road	Division Street (Aplets Way)	Red Apple/ Selts Road	School Street
SR 97 at Blewett Cutoff Road	North Dryden Road	Hay Canyon	Main Street/ Easy Street	Lower Sunnyslope Road
Saunders/Foster/ Deadman Hill Road		Old Monitor Road		
Motel Road		Red Apple/Old Monitor Road		
Dryden Dump Road				

Four environmental criteria were reviewed for this report: wetlands, vegetation, wildlife, and fisheries/streams. This review included federally listed, proposed, and candidate species as well as Washington State sensitive species. The primary focus was on species protected by the Federal Endangered Species Act of 1973, as amended (ESA).

DEA requested data on project-area endangered, threatened, and sensitive species occurrences and ecosystems from the Washington State Department of Natural Resources (DNR) Natural Heritage Program, as well as the Washington Department of Fish and Wildlife (WDFW) Priority Habitat and Species Program. Additional information on federally listed terrestrial species was obtained from previous environmental studies completed within the project area. Information on federally listed fish species was obtained from the National Oceanic and Atmospheric Administration (NOAA) and U.S. Fish and Wildlife Service (USFWS) web sites. DEA biologists inspected the vicinity of all subject intersections during a March 28, 2001 site visit to evaluate habitat conditions in the area.

Wetland location and presence was established primarily from the USDI National Wetlands Inventory maps for the area. The presence and location of project-area streams was established primarily from the U.S. Department of the Interior National Wetlands Inventory (NWI) and USGS 7.5-minute topographic maps of the area. In addition, DEA biologists inspected the vicinity of all subject intersections for evidence of additional wetland areas during a March 28, 2001 site visit.

2.0 Results

2.1 Project-Wide Summary

2.1.1 Wetlands

Nearly all wetlands shown by the National Wetlands Inventory in the project vicinity are contained within the Wenatchee River floodplain. These riparian wetlands adjoin US 2/97 at several points as described in the following report sections. In addition, the March 2001 field inspection revealed several additional wetlands. Wetlands have the potential to directly affect only two key intersections, the Dryden Dump Road in Area A and Easy Street at Lower Sunnyslope Road in Area E.

Permits including Hydraulic Project Approval from WDFW and Clean Water Act Section 404 permits from the US Army Corps of Engineers would be required to alter or discharge stormwater to wetlands. For any road improvement projects that encroach on wetlands that adjoin streams, the WDFW will require mitigation measures as part of the Hydraulic Project Approval permit.

2.1.2 Vegetation

Several protected plants were considered as potentially occurring in the project vicinity. The federally listed or proposed plants include Ute ladies'-tresses (*Spiranthes diluvialis*), Wenatchee Mountains checkermallow (*Sidalcea oregana* var. *calva*), and showy stickseed (*Hackelia venusta*). None of these plants were observed during the March 2001 site inspection.

Ute ladies'-tresses is federally listed as "threatened." It typically occurs in transition zones between mountains and flats. It grows in wetland and riparian areas, including temporary inundated wet meadows and segments of channels and swales with suitable subsurface moisture and relatively low vegetative cover (WDNR and BLM, 1999). Potentially suitable habitat could occur in herbaceous dominated wetlands and riparian areas within the project area, however the presence of this rare plant is not expected. Surveys are recommended for areas where suitable habitat is present to confirm the absence of Ute ladies'-tresses. Surveys should be completed when the species is flowering (August through mid-September).

Wenatchee Mountain checkermallow is federally listed as "endangered." It typically occurs on moist sites such as wet meadows with surface water or saturated soil conditions into early summer (WDNR and USDI BLM, 1999). It also occurs in somewhat open coniferous forest and along the edge of shrub and hardwood thickets (WDNR and USDI BLM, 1999). Its range is restricted to the Wenatchee Mountains between 575 and 967 meters (1,900 and 3,200 feet) elevation in an approximately 7 by 2-kilometer (11 by 3-mile) area that extends south-southeasterly from Leavenworth, Washington (WDNR and USDI BLM, 1999). Although wetland habitat does occur within the project area, it is not considered suitable for this species (Knecht, 2001). Therefore, it is highly unlikely that this species occurs within the project area.

Showy stickseed is federally proposed for listing as "threatened." It grows in loose granitic sand and crevices in granite or talus in the Wenatchee Mountains. It occurs between 460 and 760 meters (1,500 and 2,500 feet) elevation on 25 to 70 degree slopes. Vegetative cover is generally low in the vicinity (WDNR and USDI BLM, 1999). A total of six occurrences are documented in Chelan County. One population occurs along the shoulder of US 2/97 near MP 94. There is no suitable habitat in the project area for this species (Knecht, 2001). Therefore it is highly unlikely that this species occurs within the project area.

2.1.3 Wildlife

The primary protected wildlife species found in the project vicinity is the bald eagle (*Haliaeetus leucocephalus*), which is federally listed as "threatened." Wintering concentrations and roost sites have been documented in several locations (WDFW, 2001), primarily in Area D. Bald eagle wintering season occurs from about October 31-March 31. Wintering bald eagles concentrate in areas of abundant food sources. Eagles typically perch in the tallest trees near their food source during the daytime in deciduous trees, or dead tops of coniferous trees. Evening roosts may be established in nearby areas of mature forest. Wintering eagles can be disturbed by ordinary construction activities up to a half-mile away if within line-of-sight and a quarter-mile if not within line-of-sight. Pile driving and blasting can disturb wintering eagles up to one mile away.

2.1.4 Fish

Several protected species and stocks of fish use the project-area reach of the Wenatchee River and Peshastin Creek. **Table 7-2** summarizes presence of project-area fish species that have been listed under the ESA or designated as Priority Species by the State. The upper Columbia spring-run chinook salmon (*Oncorhynchus tshawytscha*) and upper Columbia River steelhead (*Oncorhynchus mykiss*) are federally listed as "endangered" under the ESA, and the bull trout (*Salvelinus confluentus*) is listed as "threatened." Upper Columbia River spring chinook salmon and Upper Columbia River steelhead trout may use waters within the project area for migratory holding, spawning, overwintering, and rearing (Dawson et al., 1999). Bull trout and sockeye salmon (*Oncorhynchus nerka*) are unlikely to use this area for life stages other than migration.

As described in the area-specific sections below, nearly all tributary streams crossing US 2/97 were found to be either dry washes or fully channelized irrigation ditches. Therefore, alteration of these is likely to have minimal effect on fish beyond possible wet-season conveyance of sediment to the Wenatchee River. However, permits including Hydraulic Project Approval from WDFW and Clean Water Act Section 404 permits from the U.S. Army Corps of Engineers would be required to alter these or to discharge stormwater. For any road improvement projects that encroach on the river or adjoining wetlands, or which discharge collected stormwater into the river, the WDFW will require measures to protect these species as part of the Hydraulic Project Approval permit.

Table 7-2. Protected Fish Species in Wenatchee River in Project Area

Species/ESU*	Use of Project Vicinity	Seasonal Presence in Project Vicinity	Federal End. Species Act. Status
Lake Wenatchee Sockeye	Migration	June - August	Not warranted for listing
Upper Columbia R. Summer/Fall Chinook	Migration, spawning	July - October	Not warranted for listing
Upper Columbia R. Steelhead	Migration, spawning	All year	Endangered
Upper Columbia R. Spring-Run Chinook	Migration	March - July	Endangered
Bull Trout	Migration		Threatened
Umatilla Dace	Resident	Year-round	Not proposed (WA State Species of Concern)

*Evolutionary Significant Unit

2.1.5 Key Intersection Constraints

7- 3 summarizes environmental constraints that are apparent at each of the key intersections designated by WSDOT.

Table 7-3. Environmental Constraints by Key Intersection

Intersection	Environmental Constraints
SR 97	Peshastin Creek Riparian Area
Blewett Cutoff Road	None apparent
SR 97 at Blewett Cutoff Road	Peshastin Creek Riparian Area/potential Ute ladies'-tresses habitat
Saunders/Foster/Deadman Hill Road	None apparent
Motel Road	None apparent
Dryden Dump Road	Emergent wetland in SW 1/4 of intersection
Alice Road	None apparent
Dryden Road	None apparent
North Dryden Road	Intermittent stream in SW 1/4 of intersection
Cottage Avenue (Cotlets)	None apparent
Division Street (Aplets)	Adjoins Wenatchee River channel immediately to south
Hay Canyon	None apparent
Old Monitor Road	None apparent
Red Apple/Old Monitor Road	None apparent
Bridge Street	None apparent
Red Apple/Selts Road	None apparent
Main Street/ Easy Street	Adjoins Wenatchee River channel immediately to south Eagle wintering roosts about 1/2 mile downstream, potential Ute ladies'-tresses habitat
Easy Street	Emergent/open water wetland near NW 1/4 of intersection, potential Ute ladies'-tresses habitat
School Street	None apparent
Lower Sunnyslope Road	None apparent

2.2 Area A: Blewett Junction

2.2.1 Wetlands

Nearly all wetlands shown by the National Wetlands Inventory in Area A are contained within the Wenatchee River floodplain. However, field inspection of key intersections revealed an additional wetland located at the southwest corner of the intersection of Dryden Dump Road and US 2/97 (**Figure 1**). This wetland extends from the road fill to the toe of the nearby slopes, and appears to be fed by groundwater discharge. It would be classified as Palustrine Emergent/Palustrine scrub-shrub, and is dominated by willows (*Salix*, sp.), black cottonwood (*Populus balsamifera*), and grasses.

2.2.2 Vegetation

No protected plant species were identified in Area A. This area lies primarily within the Peshastin Creek and Wenatchee River floodplains, where the vegetation is dominated by fruit orchards, small pastures, and residential lawn. Narrow strips of riparian vegetation consisting primarily of willow, black cottonwood, ponderosa pine (*Pinus ponderosa*) and red alder (*Alnus rubra*) line the Wenatchee River and its tributaries. Potentially suitable habitat for Ute Ladies'-Tresses may be present in the riparian area associated with Peshastin Creek at the Blewett Cutoff Road intersection. Because of the species' rarity, its presence is unlikely. Surveys during the flowering season could confirm their absence.

Figure One:
SR2 Cottage Ave, et al.
(U.S. 2/97 Corridor Safety Study)
Blewett Junction to Wenatchee,
Environmental Resource Map

Key Intersections

Parcel Boundaries

Wetlands Updates

NWI Wetlands

Highways

Watercourses

N

W

E

S


1000

0


1000

2000

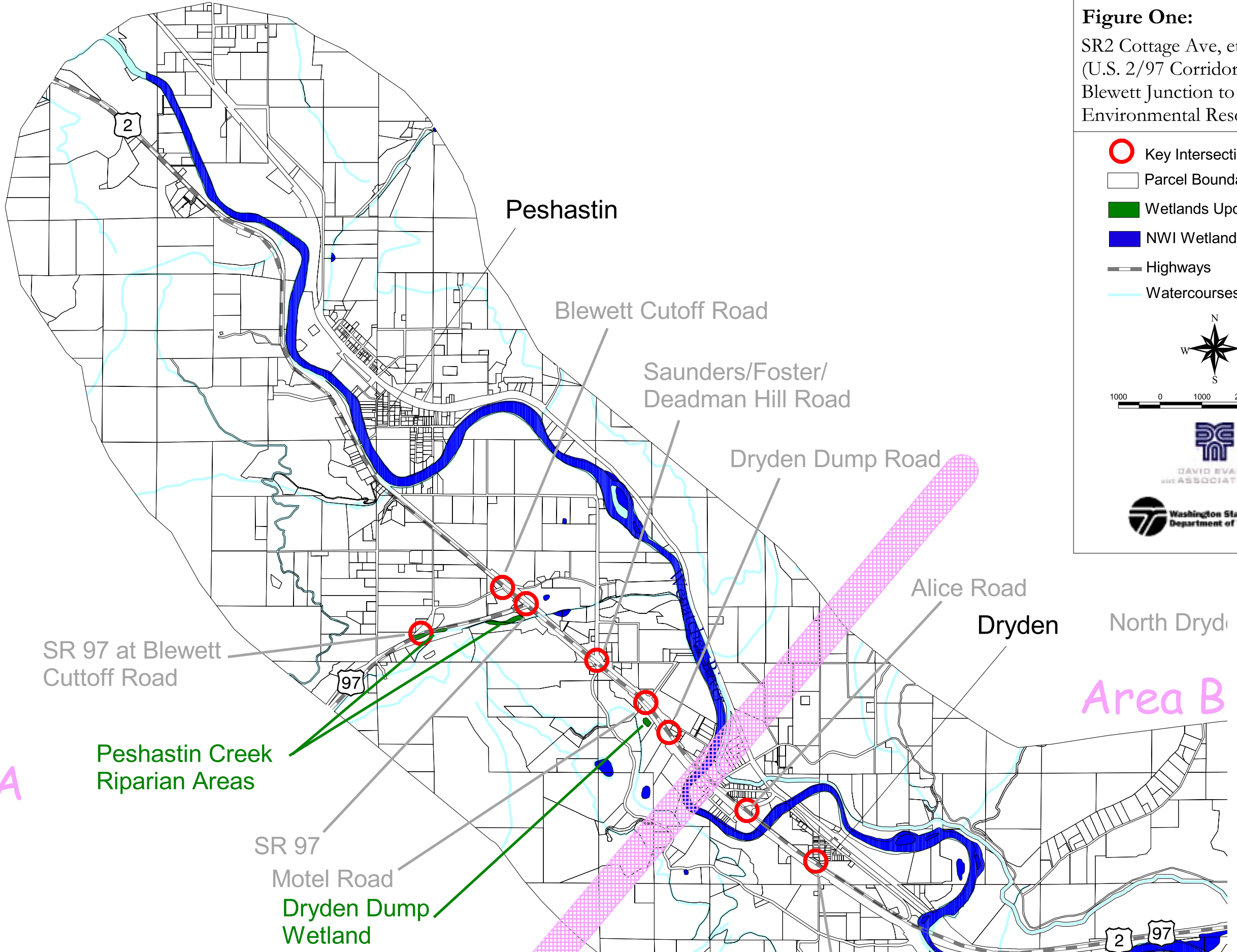
Feet



DAVID EVANS
and ASSOCIATES, INC.



Washington State
Department of Transportation



SR 97 borders the Peshastin Creek channel, and any eastward expansion of SR 97 or its key intersections with US 2/97 and Blewett Cutoff is likely to encroach on riparian vegetation which is classified as a Priority Habitat by the State (Figure 1). Such expansion may also encroach on the Creek's floodway, potentially affecting high flow conveyance. The wetland identified at the Dryden Dump Road/US 2/97 intersection and the Peshastin Creek riparian area most likely are not suitable habitat for Ute ladies'-tresses, however surveys during the flowering period could confirm the species absence.

2.2.3 Wildlife

No reports or observations of listed or priority wildlife were found for Area A. Regular or large concentrations of wintering bald eagles are not documented in Area A, however individual eagles could occur along the Wenatchee River corridor throughout the wintering season. A Northern Goshawk nest is reported several miles to the southwest, but the management circle designated by the WDFW does not extend to the project area.

2.2.4 Fish

SR 97 borders the Peshastin Creek channel, and any eastward expansion of SR 97 or its key intersections with US 2/97 and Blewett Cutoff is likely to encroach into the riparian area which is considered critical habitat for listed chinook and steelhead (Figure 1). This could potentially cause adverse affects to habitat conditions for native fish, including the federally listed spring chinook and steelhead. A few spawning spring chinook have been documented in Peshastin Creek. (Mosey and Truscott, 1999) The Wenatchee River and Peshastin Creek each cross US 2/97 once in Area A.

2.3 Area B: Dryden

2.3.1 Wetlands

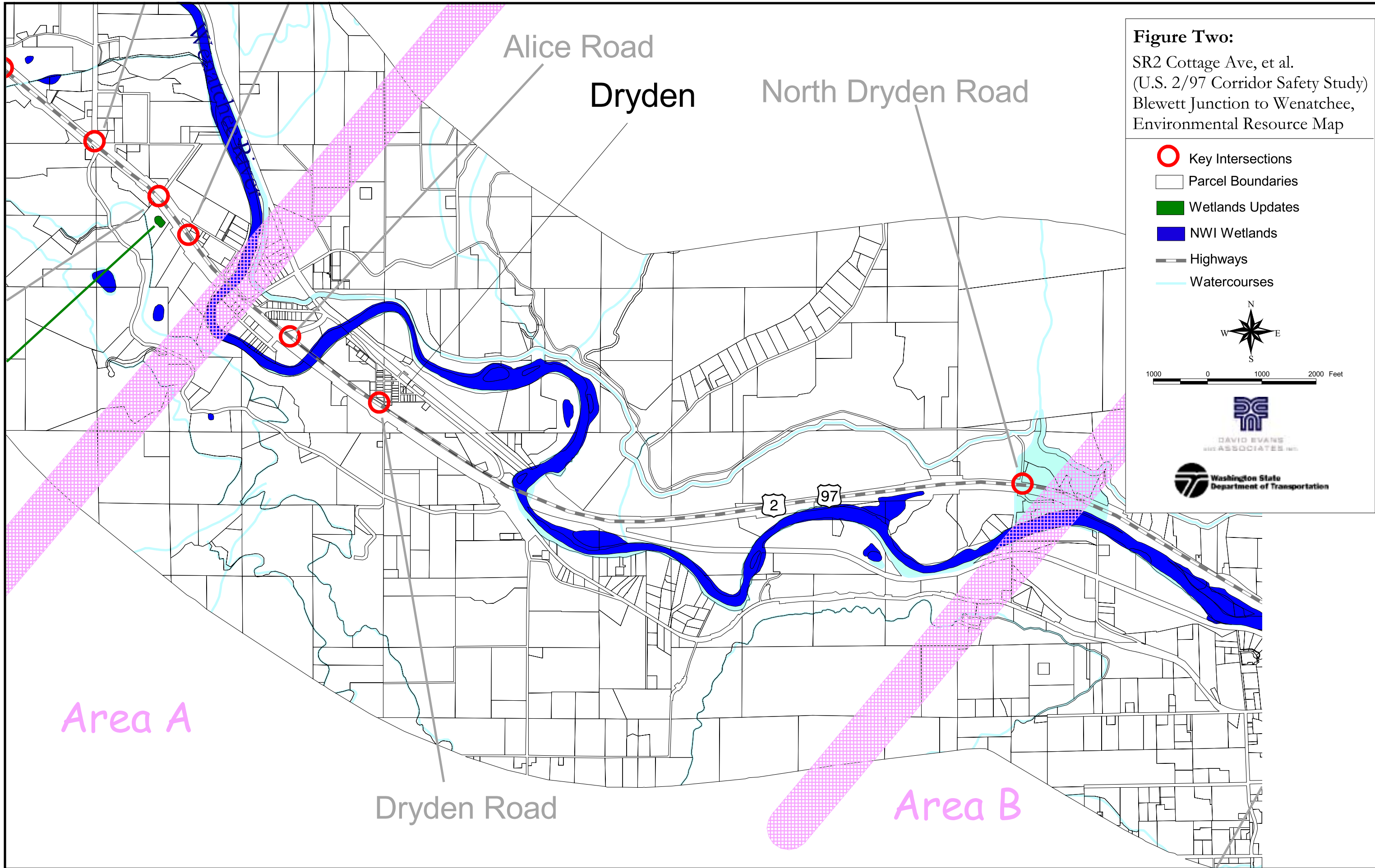
Nearly all wetlands shown by the National Wetlands Inventory in Area B are contained within the Wenatchee River floodplain (**Figure 2**). These riparian wetlands adjoin US 2/97 at one point near MP 108.2. No riparian wetlands adjoin key intersections.

2.3.2 Vegetation

No protected plant species were identified in Area B. This area lies primarily within the Wenatchee River floodplain, where the vegetation is dominated by fruit orchards, small pastures, and residential lawn. Narrow strips of riparian vegetation consisting primarily of willow, black cottonwood, ponderosa pine, and red alder line the Wenatchee River and the lower reaches of its tributaries. The key intersections in Area B do not contain suitable habitat for federally protected plants.

2.3.3 Wildlife

No reports or observations of listed or priority wildlife were found for Area B. Regular or large concentrations of wintering bald eagles are not documented in Area B, however individual eagles could occur along the Wenatchee River corridor throughout the wintering season.



2.3.4 Fish

The Wenatchee River crosses US 2/97 twice in Area B, and parallels it closely near MP 108 (Figure 2). A Wenatchee River tributary stream is mapped by the USGS and WDFW (2001) crossing US 2/97 near MP 107.5. During the March 2001 site inspection, this stream was found to be a concrete-lined irrigation ditch. Another stream is mapped immediately west of North Dryden Road. The stream was found to be a dry, channelized swale. Nevertheless, it is likely to be regulated as a stream by WDFW. No fish use documentation beyond that presented in Section 2.1 was found for Area B.

2.4 Area C: Cashmere

2.4.1 Wetlands

Nearly all wetlands shown by the National Wetlands Inventory in Area C are contained within the Wenatchee River floodplain. These riparian wetlands adjoin US 2/97 at several points, notably near MP 110.8 (Figure 3). No riparian wetlands adjoin key intersections.

2.4.2 Vegetation

No protected plant species were identified in Area C. This area lies primarily within the Wenatchee River floodplain, where the vegetation is dominated by fruit orchards and residential lawn. Narrow strips of riparian vegetation consisting primarily of willow, black cottonwood, ponderosa pine, and red alder line the Wenatchee River and the lower reaches of its tributaries. Where the Wenatchee River passes through the town of Cashmere, the banks are heavily rip-rapped and herbaceous vegetation is lacking. The key intersections in Area C do not contain suitable habitat for federally protected plants.

2.4.3 Wildlife

Regular or large concentrations of wintering bald eagles are not documented in Area C, however individual wintering eagles have been documented along the Wenatchee River corridor within Area C (WDFW, 2001). Giant Columbia Spire Snail, a State Priority Species, has been documented at the Wenatchee River near Hay Canyon in Area C (WDFW, 2001).

2.4.4 Fish

A channelized reach of the Wenatchee River parallels US 2/97 at Cashmere (Figure 3). Any significant placement of new fill south of US 2/97 at Division Street (Aplets Way) is likely to encroach on the Wenatchee River channel. This would require HPA and 404 permitting, and could adversely affect fish species including the federally listed spring chinook salmon and steelhead trout.

A stream emerges from Nahatum Canyon and crosses US 2/97 in mile 111. This stream was flowing at the time of the site inspection.

A stream mapped at approximately MP 109.2 was found to be a dry swale with a culvert under US 2/97 no defined channel. Two streams mapped in mile 113 both were found to be dry swales, with culverts under US 2/97 but no defined channels.

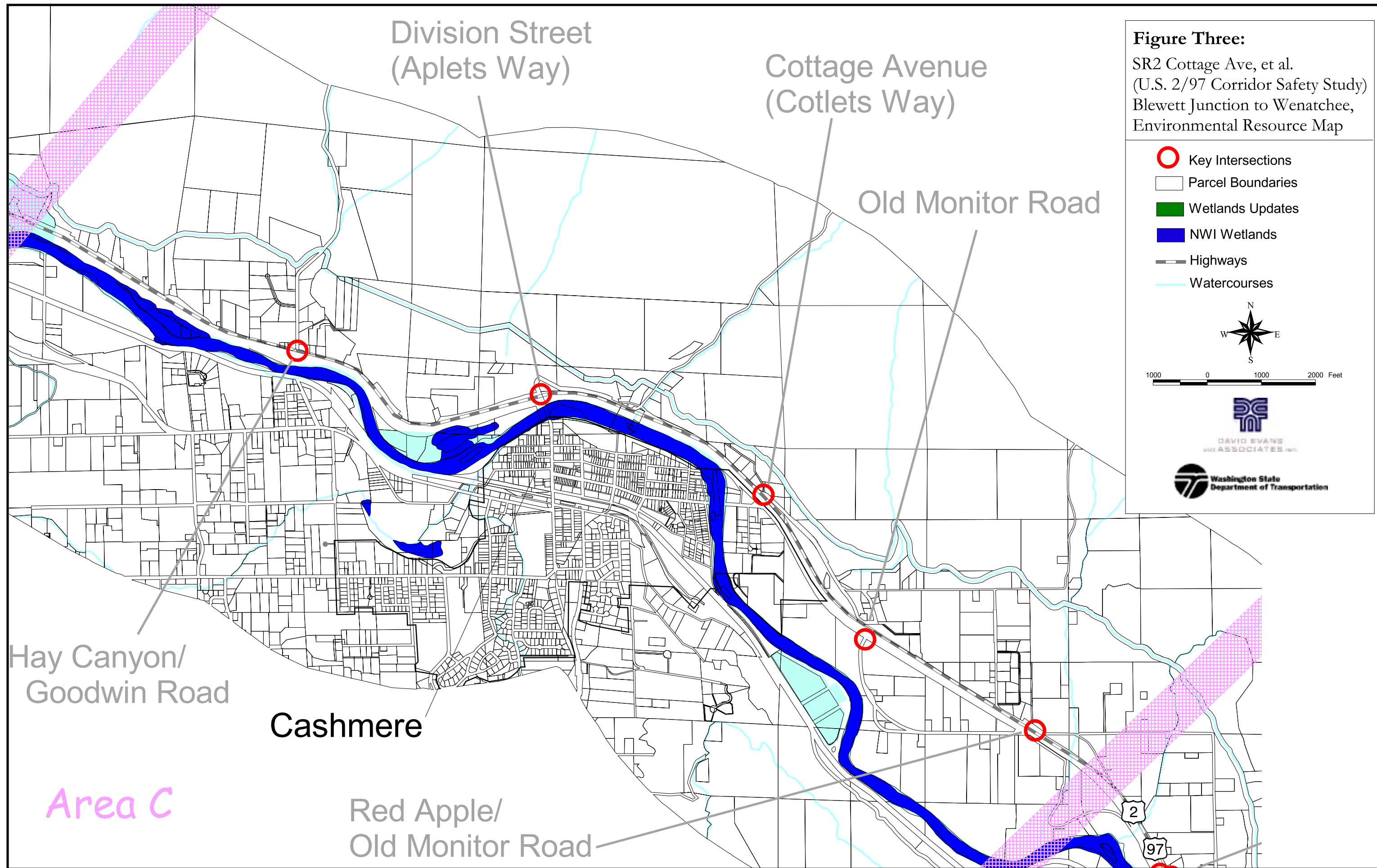


Figure Three:
SR2 Cottage Ave, et al.
(U.S. 2/97 Corridor Safety Study)
Blewett Junction to Wenatchee,
Environmental Resource Map

- Key Intersections
- Parcel Boundaries
- Wetlands Updates
- NWI Wetlands
- Highways
- Watercourses



1000 0 1000 2000 Feet



DAVID EVANS
AND ASSOCIATES, INC.



2.5 Area D: Monitor

2.5.1 Wetlands

Area D includes several large wetland areas associated with the Wenatchee River and adjoining US 2/97 (**Figure 4**). Palustrine scrub-shrub wetlands lie along both sides of US 2/97 near MP 113.7, west of the Main Street/ Easy Street "key intersection."

Relatively extensive areas of emergent, forested, and scrub shrub wetlands adjoin US 2/97 in mile 115 in the eastern end of Area D and western end of Area E. These wetlands are vegetated largely by cattail (*Typha latifolia*), willow, and black cottonwood. They do not extend to any of the key intersections.

2.5.2 Vegetation

No protected plant species were identified in Area D. This area lies primarily within the Wenatchee River floodplain, where the vegetation is dominated by fruit orchards and residential lawn. Narrow strips of riparian vegetation consisting primarily of willow, black cottonwood, ponderosa pine, and red alder line the Wenatchee River and the lower reaches of its tributaries. The wetlands west of the Main Street/Easy Street intersection most likely are not suitable habitat for Ute ladies'-tresses, however surveys during the flowering period could confirm the species absence.

2.5.3 Wildlife

Washington State PHS identifies a wintering bald eagle regular large concentration area in the Wenatchee River riparian zone within Area D. It is not within a half-mile of any key intersections. Wintering bald eagle use is documented throughout the entire Wenatchee River corridor within Area D. Eagles perch on the large, dominant cottonwoods within the corridor and feed on salmon and steelhead. Several adult and juvenile eagles were observed in Area D during DEA's March 2001 site visit.

A bald eagle roost, identified by PHS is close to US 2/97 in Area D, but are not within a half-mile of any key intersections. However, the vicinity of proposed projects in Area D will need to be surveyed in more detail at the time of project permitting. Activities such as pile driving or blasting within the wintering period could disturb eagles up to one mile away. Regular construction activities within the wintering period could disturb eagles up to a half-mile away.

2.5.4 Fish

The Wenatchee River parallels US 2/97 closely throughout much of Area D. However, no key intersections are directly adjoining the Wenatchee or other streams. In addition to the fish described in Section 2.1, the Umatilla Dace, a State Priority fish species has been documented in the Wenatchee River within Area D.

2.6 Area E: Sunnyslope

2.6.1 Wetlands

Relatively extensive areas of emergent, forested, and scrub shrub wetlands adjoin US 2/97 in the vicinity of MP 115 in the eastern end of Area D and western end of Area E (**Figure 5**). At the Easy Street/Lower Sunnyslope Road intersection, wetlands extend beyond those depicted on the NWI map. These wetlands occupy the corner west of Easy Street and north of US 2/97. The wetlands include large open water

areas, as well as smaller scrub-shrub, and forested fringes. The wetland is vegetated largely by common cattail, willows, and black cottonwoods. The water is conveyed southward under US 2/97 by a concrete box culvert. Any improvements to this intersection would need to avoid or obtain permits as summarized in Section 2.1. No other wetlands were observed elsewhere in the vicinity of US 2/97 in Area E.

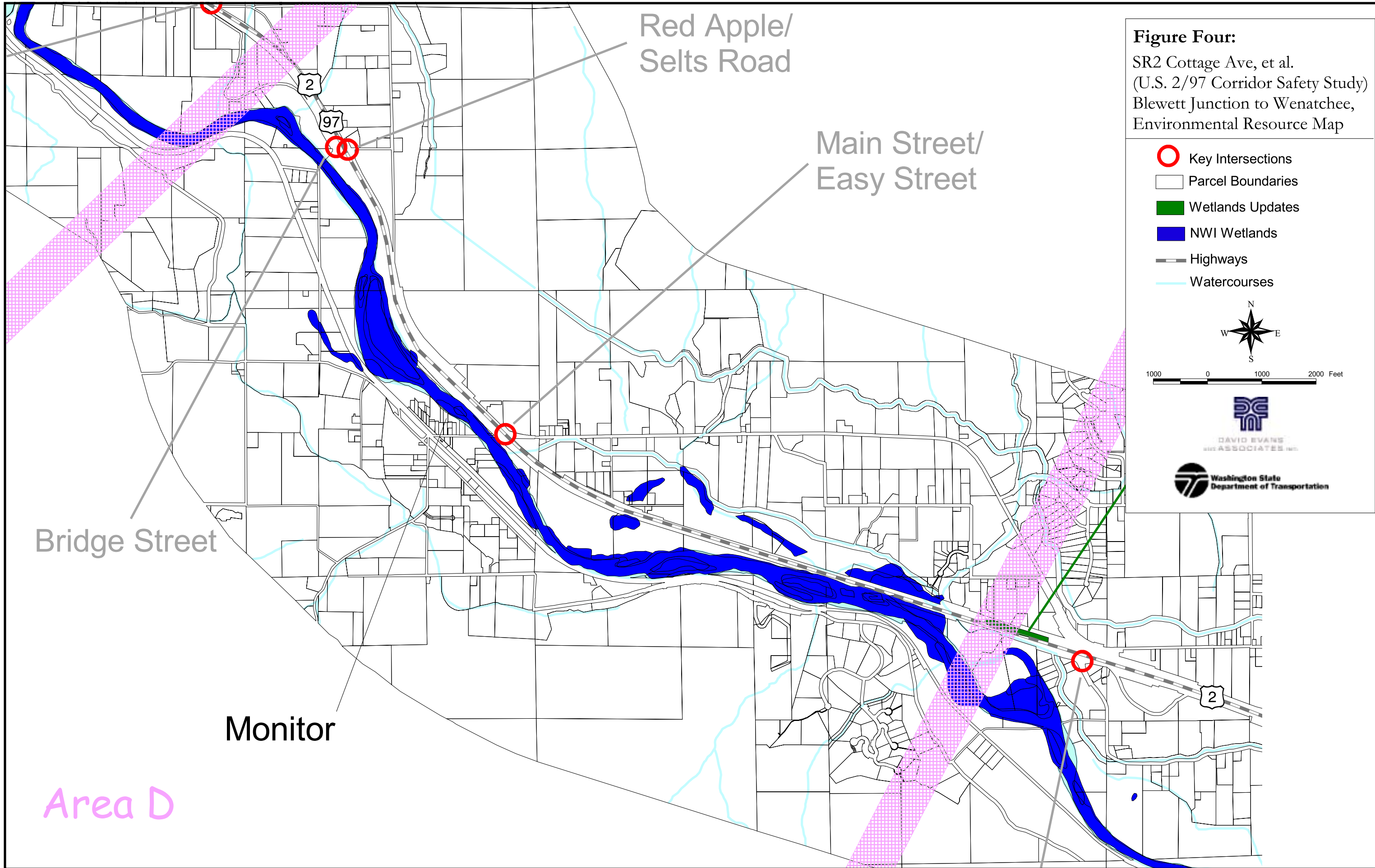


Figure Four:
SR2 Cottage Ave, et al.
(U.S. 2/97 Corridor Safety Study)
Blewett Junction to Wenatchee,
Environmental Resource Map

Key Intersections

Parcel Boundaries

Wetlands Updates

NWI Wetlands

Highways

Watercourses

1000 0 1000 2000 Feet

DAVID EVANS AND ASSOCIATES, INC.

Washington State Department of Transportation

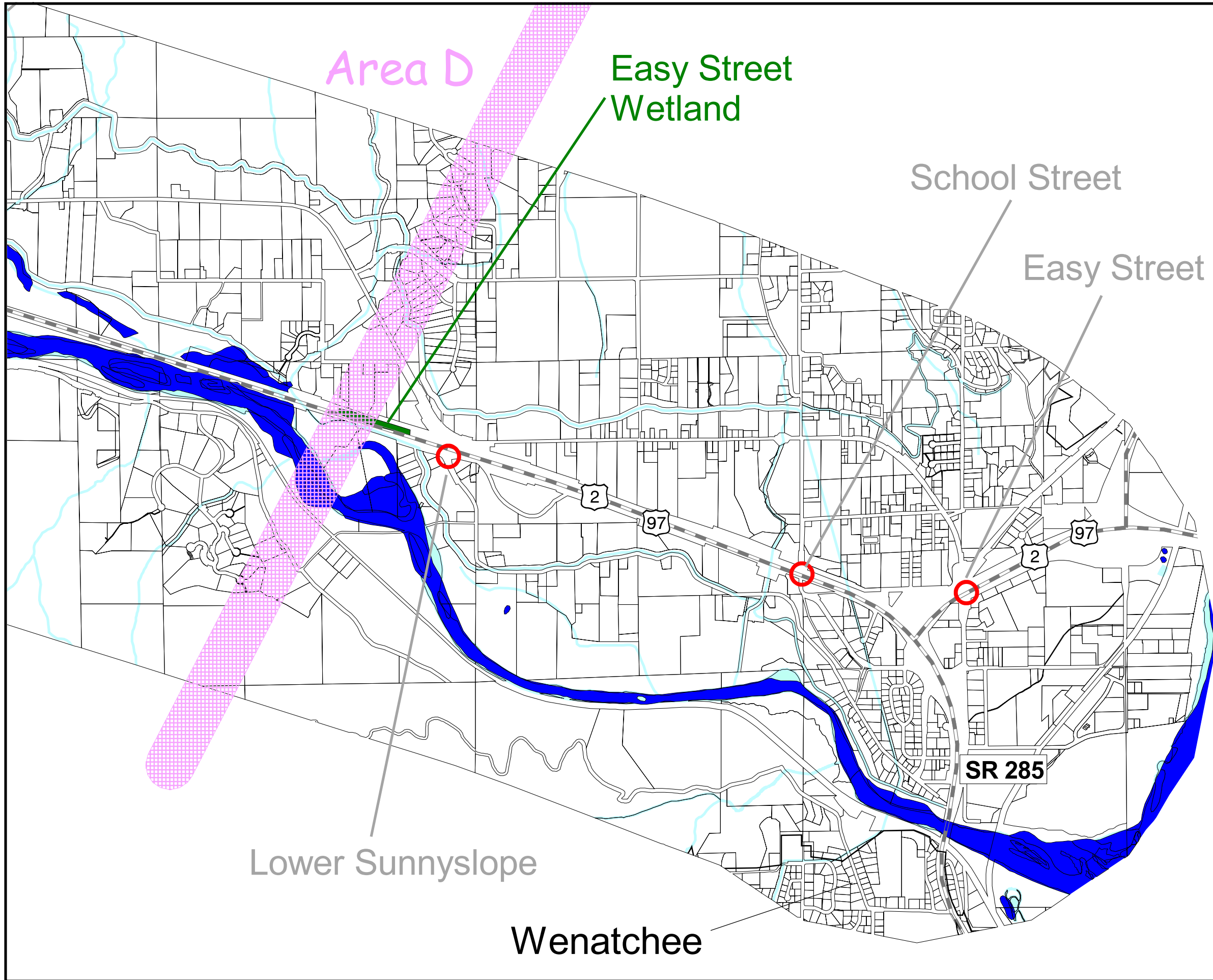
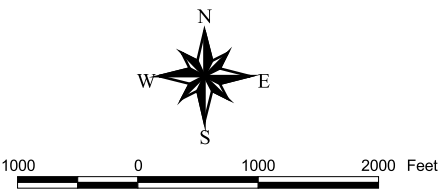


Figure Five:
SR2 Cottage Ave, et al.
(U.S. 2/97 Corridor Safety Study)
Blewett Junction to Wenatchee,
Environmental Resource Map

- Key Intersections
- Highways
- Watercourses
- Parcel Boundaries
- NWI Wetlands
- Wetlands Updates



Data Sources:
Highways from WSDOT
Streams from Chelan county
Parcel Boundaries from Chelan county
NWI from USFW

DAVID EVANS
and ASSOCIATES, INC.

Washington State
Department of Transportation

2.6.2 Vegetation

No protected vegetation species were identified in Area E. This area lies mostly on a plateau at an elevation above the Wenatchee River floodplain. The vegetation primarily consists of fruit orchards, residential lawn, invasive plants, and grasses. The wetlands west of the Easy Street/Lower Sunnyslope Road intersection most likely are not suitable habitat for Ute ladies'-tresses, however surveys during the flowering period could confirm the species absence.

2.6.3 Wildlife

Documented occurrences of individual wintering eagles are over one-half mile from and are not within line of sight of any key intersections in Area E. Washington State PHS identifies mountain quail, a State Priority Species, about one-half mile north of US 2/97 within Area E.

2.6.4 Fish

The Wenatchee River mainstem neither crosses nor closely parallels US 2/97 in Area E (Figure 5). No fish use documentation beyond that presented in Section 2.1 was found for this reach. A mapped stream through a deep canyon west of School Street Road was found to be a concrete-lined ditch.

2.7 Impacts and Mitigation

For any proposed project activities that encroach within or over a stream channel, an HPA permit will be required from WDFW. This permit will specify required mitigation measures, including primarily best management practices (BMPs). These are likely to include specific measures to control sedimentation and water pollution, as well as seasonal windows limiting work near streams to the summer low-flow season and times when migratory fish are less likely to be present.

Should impacts to streams and wetlands be unavoidable, compensatory mitigation is likely to be required. Because many small tributary streams are ephemeral and channelized in nature, most of the compensatory mitigation opportunities for fish are likely to be located along the mainstem Wenatchee River and Peshastin Creek. Significant fish habitat has likely been lost by channelization and armoring of the Wenatchee River in the project vicinity. Therefore, compensatory mitigation would be likely to involve restoring remnant side channels and floodplain areas, such as the left bank side channel near MP 117. Planting of native riparian trees would be beneficial for both fish and wildlife throughout much of the project-area reach. Numerous wetlands are likely to have been filled or drained during past development activities in the project area. Opportunities for wetland creation and enhancement occur throughout the Wenatchee River riparian areas, including the vicinity of the Easy Street intersection.

Chelan County is currently conducting a channel migration zone study along the lower Wenatchee River from Leavenworth to the Columbia River. This analysis will examine historical floodplain connectivity and explore restoration opportunities (Kaputa, 2001). When completed in Fall 2001, this report could be used to help identify site specific restoration opportunities along the US 2/97 corridor. WDFW area habitat biologist Bob Steele also identified mitigation opportunities along most of the corridor consisting of independent boulder and log (deflector structures) placements around WSDOT bridge locations to create rearing habitat for chinook and steelhead. Several opportunities for backwater channel reconnection were also identified.

For any proposed project activities that require a federal permit or that have federal funding, ESA Section 7 compliance will be required. Impacts to federally listed and proposed species will have to be evaluated and minimized. Mitigation is not a requirement under Section 7 of the ESA.

2.8 References

Dawson, Pierre, Diane Driscoll, and Jacqueline Hawkins 1999. Biological Assessment for Steelhead, Spring Chinook, Bull Trout, and Cutthroat Trout in Mainstem Wenatchee Watershed. Baseline Condition and Effects of Ongoing Activities, including Grazing, Recreation, and Water diversions, effective January 1999. Wenatchee National Forest, Wenatchee, Washington.

Kaputa, M. 2001. Personal Communication with Cindy Callahan. Chelan County Watershed Planning Coordinator.

Knecht, D. 2001. Personal Communication with Cindy Callahan. U.S. Forest Service, Leavenworth Ranger District Botanist.

Mosey, Thaddeus R., and Keith Truscott 1999. Spring and Summer Chinook Spawning Ground Surveys on the Wenatchee River Basin, 1998. Chelan County Public Utility District. Fish and Wildlife Operations. Wenatchee, Washington.

US Geological Survey 2001. National Wetlands Inventory. Geographic Information System Coverage.

Washington State Dept. Natural Resources 2001. Priority Habitats and Species Database.

Washington Department of Natural Resources and the Bureau of Land Management. 1999. *Field Guide to Washington's Rare Plants*. WDNR. Olympia, Washington.

APPENDICES

APPENDIX A

APPENDIX B

Endnotes

ⁱ The Wenatchee World; March 8, 2001; "Tech Park seen as 'win-win' plan"; Stephen Maher; page A1.